

# THE LEGACY CURRICULUM

Compiled by Paradigm Initiative



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Paradigm Initiative  
374 Borno Way, Yaba Lagos, Nigeria  
+234 1 342 62 45  
hello@paradigmhq.org



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# Foreword

In the year 2017, Paradigm Initiative opened its first office in Ajegunle, a suburb of Lagos, Nigeria. The goal was to use ICT as a tool to fight unemployment and poverty by extension. What started as a young initiative would soon grow to expand to multiple locations in Nigeria. As at December 2021, PIN has trained over 7000 youths on LIFE skills, ICT skills, Financial readiness and entrepreneurial skills. The impact of these interventions have been aptly captured in the "Echoes from LIFE series"; A periodic publication that documents the visible impacts of functional learning through the LIFE program. PIN's LIFE team experimented and established the most important topics and lessons that can help prepare learners for the digital economy,

Having implemented this program across different locations for 15 years. The LIFE Legacy curriculum will launch the career trajectory for learners and give them access into the kind of LIFE they deserve and desire. Any young person, or anyone at all, who dutifully sit through the LIFE training sessions and learns the content of this curriculum can comfortably kickstart a career in ICT or begin to leverage the power of ICT to expand their opportunities' brackets, irrespective of field, industry or existing skills-sets. This LIFE legacy curriculum serves to standardise the LIFE program, scale it and make it available to a wide range of underserved young people spread across different underserved communities around the world.

Boye Adegoke.  
Senior Manager, Strategy and Grants  
Paradigm Initiative

# Acknowledgments

We would like to acknowledge and appreciate all those whose efforts made completing the work possible. Special thanks are due to 'Gbenga Sesan, Founder and Executive Director, Paradigm Initiative, whose vision, desire for improvement, and push, set the background for this work. Tosin Abolaji, PIN's pioneers Programs officer for the LIFE project, who led the team for 10 years until recently, and who mentored other members of the team to consistently deliver on the LIFE training sessions. Our Chief Operating Officer Nnenna Paul-Ugochukwu whose stimulating suggestions and encouragement helped the team in all times of the fabrication process and in developing this curriculum. We sincerely thank Adeboye Adegoke for the time he spent proofreading and making necessary edits to the draft copy and for writing the foreword to this curriculum.

We would also like to acknowledge with much appreciation the crucial role that the members of Paradigm Initiative's team Ihueze Nwobilor, Angela Onyegbuna, Odinakachi Nwafor, Amina Idris, Sani Suleiman, Philip Kabii and Aicha Thendal-Fall played in researching and putting together the quality contents that make up different sections of the curriculum.

Paradigm Initiative Communication team Judith Ogutu, Kenneth Oyeniya, and Dodeye Ebri were at their best all through this work, both with the necessary edits and beautiful designs and we appreciate them for that.

Finally, we appreciate our valuable partners; International Youth Foundation and Microsoft for the contents culled from their Build Your Business and office productivity resources for the Microsoft productivity tools and entrepreneurship sections of the curriculum.

# Acronyms and Abbreviations

API - Application Programming Interface  
BOM - Browser Object Model

CLI - Command Line Interface

CSS - Cascading Style Sheets

CV - Curriculum Vitae

DDL - Data Definition Language

DDM - Data Manipulation Language

DMS - Database management systems

DOM - Document Object Model

DQL - Data Query Language

HTML - HyperText Markup Language

HTTP - Hypertext Transfer Protocol

IDE - Integrated development environment

JSX - JavaScript XML

KPI - Key Performance Indicator

LIFE - Life Skills, ICT, Financial Readiness, Entrepreneurship

RDBMS - Relational Database Management Systems

SEO - Search Engine Optimization

SQL - Structured Query Language

SWOT - Strength Weakness Opportunity Threat

URL - Uniform Resource Locator

VCS - Version Control System

XML - Extensible Markup Language

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# Introduction

The LIFE Legacy curriculum consists of eight courses that cover basic and intermediate digital, entrepreneurial, life, and financial literacy skills. These courses include various computer-aided activities that teach learners basic skills and technological know-how required to be ready to either work for oneself or get employed in the organized employment sector. The skills introduced on the computer are designed to be enhanced by face-to-face (f2f) activities led by a classroom facilitator and reinforced through hands-on activities. The activities are designed to be self-guided by the learner; however, facilitators would be present to support learners through this process. The LIFE Legacy curriculum achieves its maximum impact with active facilitation throughout the courses from qualified facilitators and hands-on activities realized by the learners. The 8 courses consist of approximately 200 instructional hours. The concepts introduced via the computer are reinforced by approximately 300 hours of facilitator-led instruction and hands-on activities conducted within and outside the classroom.

## **The curriculum features three types of activities:**

Tasks for learners to perform, including simulations, case studies, and interactive exercises.  
Exercises to create and save on the computer or other storage device for later use; and  
Hands-on assignments to complete the classroom.

## **COURSE 1**

Introduction to Computing, Internet, and Networking

### **Objective:**

This module will introduce learners to the system software and provide a general overview of how operating systems work. Learners will also learn how the operating systems communicate with the hardware, the internet, and the users. They will also learn how files are stored and managed on computers.

The module will also help learners understand the modern basics for networking in small and large networks, using both wired and wireless connections. They will learn about the different security measures to observe when connected to certain networks and the common troubleshooting techniques.

The learners will also get to learn the ethical and legal issues related to using computers

### **Outcomes:**

Understand the types of operating systems available  
Understand how drivers work



Explain concepts for computer file storage

Distinguish between types of networks

Understand network hardware

Understand the internet and connection methods

Troubleshoot routine internet and network problems

Understand the ethical and legal issues that arise from using computers and the internet

Introduction to computing

History of Computers

Operating System (Types of operating systems)

Drivers

Digital storage and back-ups

Managing applications

Managing files

Troubleshooting common OS problems

Internet and Networking

The Internet and connecting to the internet

Network Hardware

Wireless networking technologies

Troubleshooting connectivity problems

Online communication

Internet and network security

Legal and Ethical Issues in Computing

Legal issues in computing (Intellectual property rights, copyright, licensing)

Ethical issues in computing (Plagiarism, spamming)

# Microsoft Productivity Tools (Word, Excel, and PowerPoint)



## Microsoft Productivity Tools

*In many ways, a computer is the ultimate productivity tool. With the right software, a computer can process text to create engaging documents (Word). A computer can turn data into spreadsheets so that information can be easily organized and shared (Excel). Computers can even be used to create visual presentations that allow you to communicate your ideas (PowerPoint). In this module, we will learn about Microsoft productivity tools and how they can help you achieve your professional goals.*

### General Objectives:

To know how to use the most common Microsoft Office programs - Word, Excel and PowerPoint.

### General outcomes:

- Learners will understand which tasks each of the major Office programs can perform.
- Learners will be able to independently create professional-looking documents, presentations, and spreadsheets.
- Learners will be familiar with some advanced Office functions, including Mail Merge (Word) and formulas (Excel).
- Learners will understand how to use Word, Excel, and PowerPoint in a variety of professional, educational, and personal situations.
- Learners will be able to claim Office proficiency.



# Microsoft Word 2016

## Objective:

By the end of the module, candidates should be able to create documents for printing and sharing.

### Module 1; Word Basics

- 1.1 Getting Started with Word: Get to know the Ribbon, Quick Access Toolbar, and Backstage view to produce Word 2016 documents.
- 1.2 Understanding OneDrive: Learn all about working with your Microsoft account and OneDrive.
- 1.3 Creating and Opening Documents: Learn all about opening existing documents and creating new ones.
- 1.4 Saving and Sharing Documents: Learn more about saving and sharing documents

### Module 2; Working with Text

- 2.1 Text Basics: Learn how to add, delete, move, cut, copy, and paste text.
- 2.2 Formatting Text: Learn how to change font size, color, and text alignment.
- 2.3 Using Find and Replace: Learn more about using the Find and Replace features to search your document.
- 2.4 Indents and Tabs: Learn how to use the tab selector and horizontal ruler to set tabs and indents.
- 2.5 Line and Paragraph Spacing: Learn how to modify line and paragraph spacing in your documents.
- 2.6 Lists: Learn how to add and modify bulleted and numbered lists.
- 2.7 Hyperlinks: Learn how to add and modify hyperlinks.

### Module 3; Layout and Printing

- 3.1 Page Layout: Learn how to modify page orientation, margins, and size.
- 3.2 Printing Documents: Learn all about printing in Word 2016.
- 3.3 Breaks: Learn how to add page, section, and column breaks.
- 3.4 Columns: Learn all about working with columns.
- 3.5 Headers and Footers: Learn how to add and modify headers and footers.
- 3.6 Page Numbers: Learn how to add and modify page numbers.
- 3.7 Working with Objects
- 3.8 Pictures and Text Wrapping: Learn how to add pictures and use the text wrapping feature.
- 3.9 Formatting Pictures: Learn more about formatting pictures, including removing the background from an image.
- 3.10 Shapes: Learn how to add and modify shapes in your document.
- 3.11 Text Boxes: Learn how to use text boxes in Word 2016.
- 3.12 Aligning, Ordering, and Grouping Objects: Learn how to align, group, order, and rotate objects.

3.13 Tables: Learn more about working with tables.

3.14 Charts: Learn how to add and modify charts.

#### **Module 4; Collaboration and Reviewing**

4.1 Checking Spelling and Grammar: Learn how to use the review features available in Word 2016.

4.2 Track Changes and Comments: Learn how to track changes and comments when collaborating on documents.

4.3 Inspecting and Protecting Documents: Take these steps to inspect and protect your document.

#### **Module 5; Doing More with Word**

5.1 SmartArt Graphics: Learn all about using SmartArt graphics in your document.

5.2 Applying and Modifying Styles: Learn how to apply and modify styles.

5.3 Mail Merge: Learn how to use the Mail Merge feature to produce letters, labels, and envelopes.

#### **Exercise**

1. Open Word 2016, and create a blank document.
2. Change the Ribbon Display Options to Show Tabs.
3. Using Customize Quick Access Toolbar, add New, Quick Print, and Spelling & Grammar.
4. In the Tell me bar, type Shape and press Enter.
5. Choose a shape from the menu, and double-click somewhere on your document.
6. Show the Ruler if it is not already visible.
7. Zoom the document to 120%.
8. Change the Document view to Web Layout.
9. When you're finished, your document should look something like this:
10. Change the Ribbon Display Options back to Show Tabs and Commands, and change the Document View back to Print Layout.



## Excel 2016

### Objective:

By the end of this module, learners should be able to manage and store data in a spreadsheet. That is, learn how to create formulas and charts, use functions, format cells, and do more with your spreadsheets.

### Module 1; Excel 2016 Basics

- 1.1 Getting Started with Excel: Learn your way around the Excel 2016 environment.
- 1.1 Understanding OneDrive: Learn all about working with your Microsoft account or may not have used the Microsoft Productivity Tools but who want to achieve general Office proficiency.
- 1.1 t and OneDrive.
- 1.1 Creating and Opening Workbooks: Learn how to create and open Excel workbooks.
- 1.1 Saving and Sharing Workbooks: Learn how to save and share Excel workbooks.

### Module 2; Working with Cells and Sheets

- 2.1 Cell Basics: Learn how to insert and delete cells and cell content, drag and drop cells, use the fill handle, and use the cut, copy, and paste functions.
- 2.2 Modifying Columns, Rows, and Cells: Learn how to modify rows, columns, and cells in Excel.
- 2.3 Formatting Cells: Learn all about formatting text in Excel.
- 2.4 Understanding Number Formats: Learn all about formatting numbers in Excel.
- 2.5 Working with Multiple Worksheets: Learn how to add, delete, copy, and move worksheets, as well as group and ungroup worksheets.
- 2.6 Using Find & Replace: Learn how to use Excel's Find and Replace features to search for specific data.
- 2.7 Checking Spelling: Learn how to use Excel's spell check feature.
- 2.8 Page Layout and Printing: Learn how to use Excel commands that let you control the way your content will appear on a printed page.

### Module 3; Formulas and Functions

- 3.1 Intro to Formulas: Learn how to use cell references to create a simple formula in Excel.
- 3.2 Creating More Complex Formulas: Learn how to create a complex formula in Excel.
- 3.2 Relative and Absolute Cell References: Learn all about absolute and relative cell references and how they're used in Excel.
- 3.3 Functions: Learn the different parts of a function and how to create arguments to calculate values and cell references.

## Module 4; Working with Data

- 4.1 Basic Tips for Working with Data: Learn these basic tips for working with data to help you organize it and find what you need.
- 4.2 Freezing Panes and View Options: Learn how to freeze panes and split your worksheet so you're only seeing certain parts of your worksheet.
- 4.3 Sorting Data: Learn how to sort data to better view and organize the contents of your spreadsheet.
- 4.4 Filtering Data: Learn how to filter the data in your worksheet to display only the information you need.
- 4.5 Groups and Subtotals: Learn how to organize data in groups, summarize different groups using the Subtotal command, and create an outline for your worksheet.
- 4.6 Tables: Learn how to use styles to format tables in Excel.
- 4.7 Charts: Learn how to insert and modify Excel charts to visualize comparisons in your data.
- 4.8 Conditional Formatting: Learn how to apply, modify, and delete conditional formatting rules in Excel.

## Module 5; Doing More with Excel

- 5.1 Track Changes and Comments: Learn how to use Excel's track changes and comments features when proofreading workbooks.
- 5.2 Inspecting and Protecting Workbooks: Learn how to inspect and protect your Excel workbook.
- 5.3 Intro to PivotTables: Learn how to use PivotTables in Excel for stronger data analysis.
- 5.4 Doing More with PivotTables: Learn how to do more with PivotTables in Excel to better summarize data.
- 5.5 What-if Analysis: Learn how to use what-if analysis to answer different types of questions.

## Exercise

1. Open Excel 2016.
2. Click Blank Workbook to open a new spreadsheet.
3. Change the Ribbon Display Options to Show Tabs.
4. Using the Customize Quick Access Toolbar, click to add New, Quick Print, and Spelling.
5. In the Tell me bar, type the word Color. Hover over Fill Color and choose a yellow. This will fill a cell with the color yellow.
6. Change the worksheet view to the Page Layout option.
7. When you're finished, your screen should look like this:
  
8. Change the Ribbon Display Options back to Show Tabs and Commands.
9. Close Excel and Don't Save changes.



# PowerPoint

Objective:

By the end of this module, learners should be able to create and share presentations

## Module 1; PowerPoint Basics

- 1.1 Getting Started with PowerPoint: Get to know the PowerPoint 2016 interface.
- 1.2 Understanding OneDrive: Learn all about working with your Microsoft account and OneDrive.
- 1.3 Creating and Opening Presentations: Learn all about creating and opening presentations.
- 1.4 Saving Presentations: Learn how to save presentations.

## Module 2; Working with Slides

- 2.1 Slide Basics: Learn the basics of working with slides.
- 2.2 Text Basics: Learn how to cut, copy, paste, and format text.
- 2.3 Applying Themes: Learn how to apply a theme to your slides.
- 2.4 Applying Transitions: Learn how to apply transitions to your slides.
- 2.5 Managing Slides: Learn the tools available to help organize and prepare your slide show.
- 2.6 Using Find & Replace: Learn how to find and replace text.
- 2.7 Printing: Learn how to print your slides.
- 2.8 Presenting Your Slide Show: Learn how to present your slide show to an audience.

## Module 3; Text and Objects

- 3.1 Lists: Learn how to add numbered and bulleted lists.
- 3.2 Indents and Line Spacing: Learn how to use indents and line spacing.
- 3.3 Inserting Pictures: Learn how to insert and modify images.
- 3.4 Formatting Pictures: Learn how to format the images in your slides.
- 3.5 Shapes: Learn how to add and modify shapes.
- 3.6 Aligning, Ordering, and Grouping Objects: Learn how to align, group, and order objects.
- 3.7 Animating Text and Objects: Learn how to animate text and objects.

## Module 4; More Objects

- 4.1 Inserting Videos: Learn how to add and edit videos within your slides.
- 4.2 Inserting Audio: Learn how to insert and edit audio in your slides.
- 4.3 Tables: Learn how to add and modify tables.
- 4.4 Charts: Learn how to add and modify charts.
- 4.5 SmartArt Graphics: Learn how to add and edit SmartArt graphics.

## Module 5; Review and Collaborating

- 5.1 Checking Spelling and Grammar: Learn how to use the spelling and grammar check features.
- 5.2 Reviewing Presentations: Learn how to review presentations before you present them to an audience.
- 5.3 Inspecting and Protecting Presentations: Learn how to inspect and protect your presentation.

## Module 6; Customizing Your Presentation

- 6.1 Modifying Themes: Learn all about modifying themes to mix and match colors and fonts.
- 6.2 Slide Master View: Learn how to use Slide Master view to ensure a consistent look.
- 6.3 Hyperlinks: Learn how to add and edit hyperlinks.
- 6.4 Action Buttons: Learn how to add and edit action buttons.
- 6.5 Rehearsing and Recording Your Presentation: Learn how to rehearse and record your presentation.
- 6.6 Sharing Your Presentation Online: Learn how to share your presentations online.

### Exercise

1. The New Slide command on the Ribbon lets you choose \_\_\_\_\_.
2. Most slide layouts include at least one \_\_\_\_\_ by default.
3. In this image, we are clicking a button on the Quick Access Toolbar. What will happen after we click it?
- 4.
5. Suppose you're sharing a presentation with several coworkers, but you're not sure if they all have PowerPoint. What's the best way to ensure everyone will still be able to view your presentation?
6. In this image, which feature did we most likely use to quickly change the background, fonts, and layout?
- 7.
8. What do the icons in this image represent?
- 9.
10. What can you do in the Animation Pane?
11. What is a motion path?
12. The photos in this example are not evenly spaced. Which feature could we use to fix this?
- 13.
14. True or False: You can set up a presentation to run automatically.
15. If you add background music and want it to continue playing for the entire presentation, which feature should you use?
16. Let's say you want to add a company logo to the bottom-right corner of every slide. What's the most efficient way to do this?
17. True or False: You can add action buttons in the Slide Master view.





# Google Productivity Tools and Google Account



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*This curriculum is for learners who have basic proficiency in at least one desktop Office program (Microsoft Productivity Tools) but who want to work on documents in the cloud using a Google account.*

## Objectives:

To create a Google account  
To be able to create, upload,  
and share documents via  
Google Drive

## General outcomes:

Learners will have a Google account.  
Learners will be able to create, upload, and share documents in the  
cloud.



## Google Drive and Docs

- All About Google Drive: Learn all about using Google Drive.
- Getting Started with Google Drive: Get started using Google Drive.
- Creating Google Docs: Learn how to create new documents, spreadsheets, presentations, forms, and drawings.
- Uploading Files to Google Drive: Learn how to upload and sync Google Drive files.
- Managing Your Files: Learn how to manage and organize your Google Drive files.
- Converting and Printing Docs: Learn how to convert, download, and print Google Drive files.

### Module 1; Common Tasks in Documents

- 1.1 Getting Started with Your Document: Get to know the Google Docs interface, and learn how to create files.
- 1.2 Text Basics: Learn how to select, delete, drag and drop, and cut, copy, and paste text in Google Docs.
- 1.3 Formatting Text and Adding Hyperlinks: Learn more about formatting text and adding hyperlinks.
- 1.4 Using Indents and Tabs: Learn how to use indents and tabs in Google Docs.
- 1.5 Headers, Footers, and Page Breaks: Learn how to use headers, footers, and page breaks in Google Docs.

### Module 2; Doing More with Documents

- 2.1 Working with Tables: Learn how to create and edit tables in Google Docs.
- 2.2 Inserting Images: Learn how to insert and edit images in Google Docs.
- 2.3 Inserting Text Boxes and Shapes: Learn more about inserting text boxes and shapes in Google Docs.
- 2.4 Text Styles: Learn how to add styles to your document and make formatting changes that affect the whole document all at once.
- 2.5 Adding More Fonts: In this lesson, you'll learn how to choose from hundreds of free fonts to use in Google Docs.
- 2.7 Installing Add-ons: Learn how to find and install Google Docs add-ons. Like the name implies, add-ons can add new features to Google Docs.

## Module 3; Collaborating

- 3.1 Sharing and Collaborating: Learn how to share and collaborate on Google Drive files.
- 3.2 Adding and Replying to Comments: In this lesson, you'll learn how to create and reply to comments, tag collaborators, and more.
- 3.3 Using Suggestion Mode to Track Changes: In this lesson, you'll learn how to enable suggestion mode, approve, and reject changes, and comment on suggested edits.
- 3.4 Version History: In this lesson, you'll learn how to recover old versions of your docs, see which collaborator made each change, and more.
- 3.5 Email a Doc as an Attachment: In this lesson, you'll learn how to quickly share a static version of your document with anyone, even if they don't have a Google account.
- 3.4 Changing Ownership of a Doc: In this lesson, you'll learn how to transfer ownership of a Google Doc to someone else.
- 3.7 Using the Activity Dashboard: In this lesson, you'll learn how to view who has edited, commented, or shared your document in Google Docs.

## Extras

- Using Google Docs on a Mobile Device: Here's how to use Google Docs on a mobile device.
- Using Google Docs Offline: Here's how to use Google Docs when you're not online.
- Voice Typing: In this lesson, you'll learn how to use Google Docs to transcribe your voice.
- Translating Documents: In this lesson, you'll learn how to translate your document into over 100 different languages with just a few clicks.
- Linking Within a Document: Learn how to link within your document using headings and bookmarks in this free lesson.
- Smart Compose: In this lesson, you'll learn how to use Smart Compose, and you'll also learn how to turn it off.
- Custom Substitutions: In this lesson, you'll learn how to create and use custom substitutions.
- The Doc.new Shortcut: In this lesson, you'll learn a quick and easy shortcut to create new Google Drive files.
- Adding Citations: In this lesson, you'll learn how to add citations in Google Docs.
- Adjusting Margins: Learn how to use the ruler and Page Setup dialog box to adjust the margins in Google Docs.
- Keyboard Shortcuts: Learn how to find and use keyboard shortcuts in Google Docs.
- Creating a Table of Contents: In this lesson, you'll learn how to create and add a table of contents to your document in Google Docs.

**Exercise:**

1. Google Docs is most similar to which application?
2. True or False: If you already have a Google account, you can use the same account to access Google Docs.
3. True or False: If you already have a Google account, you can use the same account to access Google Docs.
4. Which command would you use to double-space the text in your document?
5. True or False: You can insert automatic page numbers for your document in the header or footer.
6. What are the sources one can add images on Google Docs?
7. How can one add textbox or sharp on Google Docs?



## Google Sheets

In this module, learn how to use the powerful tools in Google Sheets for organizing, visualizing, and calculating data in a spreadsheet.

- Getting Started with Google Sheets: Get to know the Google Sheets interface and learn how to create new spreadsheets.
- Modifying Columns, Rows, and Cells: Learn how to modify rows, cells, and columns to help personalize your files.
- Formatting Cells: Learn all about formatting cells in Google Sheets.
- Working with Multiple Sheets: Learn how to work with multiple worksheets in Google Sheets.

### Module 1; Common Spreadsheet Tasks

- 1.1 Creating Simple Formulas: Learn all about creating simple formulas in Google Sheets.
- 1.2 Creating Complex Formulas: Learn all about creating complex formulas in Google Sheets.
- 1.3 Types of Cell References: Learn about relative and absolute cell references.
- 1.4 Working with Functions: Learn all about working with functions in Google Sheets.
- 1.5 Sorting and Filtering Data: Learn how to sort and filter data in Google Sheets.

### Extras

- Understanding Number Formats: Better understand how number formats work in Google Sheets so you can make your spreadsheet easier to read.

### Exercise:

1. True or False: Google Sheets saves your changes automatically.
2. A group of cells is called a \_\_\_\_\_.
3. Which of the following features allows you to narrow down the data in your worksheet?
4. Why would you want to freeze rows in your spreadsheet?
5. Formulas should always begin with a(n) \_\_\_\_\_.
6. What are the basic mathematical symbols recognized as mathematical operators within Google Sheets?
7. What function would you use to add the values of several cells?
8. According to the order of operations, which calculation comes first in the following formula?  $=3^2/5+(12-3)$
9. Most functions contain one or more \_\_\_\_\_ in parentheses.



## Google Slides

- Getting Started with Your Presentation: Learn how to get started with your Google Slides presentation.
- Slide Basics: Learn how to insert, arrange, and change the layout of slides.
- Text Basics: Learn how to cut, copy, paste, and format text in Google Slides.
- Adding Pictures and Shapes: Learn how to add pictures and shapes to your Google Slides presentation.
- Adding Transitions and Animations: Learn how to add transitions and animations to your Google Slides presentation.
- Presenting Your Slide Show: Learn how to present your slide show.
- Editing Master Slides and Layouts: Learn all about editing master slides and layouts in Google Slides.
- Inserting and Editing Diagrams: In this lesson, you'll learn how to insert and edit diagrams into your presentation.
- Audience Q&A: In this lesson, you'll learn how to use the Audience Q&A tool to accept and share audience questions.
- Linking Between Slides: In this lesson, you'll learn how to link between slides.
- Inserting and Editing Videos: Learn how to insert and edit videos in Google Slides.
- Adding and Editing Free Templates: Learn how to add and edit free Google Slides templates.
- Installing Add-ons: Learn how to install add-ons for Google Slides.
- Printing and Creating PDF Files: Within Google Slides, learn how to print and create PDF files.
- Skipping Slides: Learn how to use the skip slide tool to hide slides from your presentation.
- Voice Type Speaker Notes: Learn how to use the voice type speaker notes feature.
- Arranging Objects: Learn how to arrange objects on your slides.
- Inserting Charts from Google Sheets: Within Google Slides, learn how to insert charts from Google Sheets.

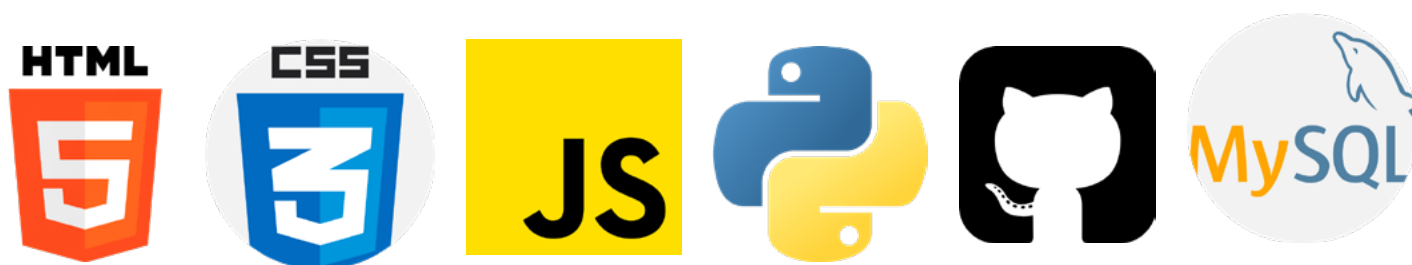
### Exercise

1. Mention another program similar to Google Slides
2. True or False: You can share a Google Slides project without allowing other people to edit it.
3. The drop-down arrow next to the New Slide commands lets you choose \_\_\_\_\_.
4. When presenting your slide show, what are some of the ways you can advance to the next slide?
5. What is the fastest way to change all of the slide layouts and colors of your presentation?
6. Let's say you want to add a company logo to the bottom-right corner of every slide. What's the most efficient way to do this?





# Web and Mobile App development



- Frontend Web development: HTML, CSS, and Javascript
- Backend Web development: MySQL/SQLite/PostgreSQL, Python.
- Full Stack Web Development: HTML, CSS, Javascript (Ajax, JQuery), Python(Django framework)
- Mobile App Development: HTML, CSS, Javascript, and React Native
- Git and GitHub

## Prerequisite Tools

- A notepad text editor.
- Integrated development environment (IDE).
- A command-line interface.
- A GitHub account.



## HTML and CSS

### Course Objective:

You will learn how to write basic HTML and CSS. Install and use a code editor. Create and view a bare bone website locally on your computer. You will learn about different types of HTML elements and the semantic meaning they carry. Adopt best practices for writing HTML to keep your code clean and readable.

## PART 1: HTML

### Module 1:

**Introduction to HTML** - This lesson covers the basics of HTML. To fully understand the basics of HTML coding you need to know the three building blocks which are; tags, elements and attributes. This lesson will cover a clear definition and example of tags, elements, and attributes.

- 1.1. Definition
- 1.2. Elements
- 1.3. Tags
- 1.4. Attributes

### Module 2:

**HTML Document Structure for Creating a Web Page** - For HTML to render content correctly in a browser, the HTML documents structure has to follow the correct web standard for HTML structure. Students will learn what this structure is and use the lessons learned to create their first web page.

- 2.1. HTML page structure
- 2.2. Saving HTML page
- 2.3. Viewing HTML page in a browser

### Activity 1:

Create a page with the basic HTML structure, save the page and preview it in a browser.

### Module 3:

**HTML Text Formatting** - HTML has a variety of tags for formatting text. These tags are used to display text in special ways. Like, make text bold, italicized, underlined e.t.c. Students will learn the process of using tags to format text for a better look and feel. Also, students will learn types of HTML tags: paired tags (has a closing tag), and Singular tags (no closing tag)

- 3.1. Types of tag - Paired and Singular tags
- 3.2. Heading tags
- 3.3. Meta tags
- 3.3. Formatting tags
- 3.6. Lists

**Module 4:**

**Adding Media Contents** - Students will learn how to use the image, video, and audio HTML elements to add media content to a web page. Each one has its own set of attributes that you may use to format it.

- 4.1. Images
- 4.2. Video
- 4.3. Audio
- 4.4. Embed
- 4.5. Table Attributes

**Module 5:**

**Adding Hyperlinks** - Students will learn how to create hyperlinks with anchor tags. This element is useful for linking to another file, page or website. This lesson will teach how to build connections between pages of a website.

- 5.1. Text links.
- 5.2. Image links.
- 5.2. Hyperlink attributes.

**Module 6: Creating Tables** - This lesson is all about creating tables for rendering and displaying data in a grid.

- 6.1. Table Tags
- 6.2. Table Attributes

**Module 7:**

**iframe** - This lesson will help you make use of the iframe element, which is used to create a nested browsing context, effectively embedding another HTML page into the current page.

- 7.1. iframe element
- 7.2. iframe attribute

**Module 8:**

**Forms** - Forms are the most common technique to collect data from users. The form elements will be covered in this lesson.

- 8.1. Input
- 2.2. Text Fields
- 8.3. Hidden Fields
- 8.4. Password
- 8.5. Reset
- 8.6. Submit
- 8.7. Checkboxes
- 8.8. Radio
- 8.9. Select
- 8.10. Hidden Fields
- 8.11. Upload
- 8.12. Textarea

**Module 9:****HTML Semantic -**

- 9.1. HTML non-semantic elements
- 9.2. HTML semantic elements

**Activity 2:**

Create a basic multi-page website with two HTML files. Use hyperlinks to connect each HTML file. Add at least two different media contents, create a table and a form. Launch the website on your browser and make sure you can access all pages. For this activity, Keep the content minimal.

**Part 2: CSS****Module 1:**

**CSS Introduction** - This lesson covers an introduction to Cascading Style Sheet(CSS). Students will learn what CSS is, rules that define the structure of CSS, various methods of implementing CSS in a stylesheet.

- 1.1. What is CSS
- 1.2. CSS Syntax
- 1.3. CSS Selector
- 1.4. How to Add CSS
- 1.5. Inline CSS
- 1.6. Internal CSS
- 1.7. External CSS

**Module 2:**

**CSS Styling** - Now it's time to learn how to use this design language to apply style and control the design of web pages. Students will learn how to define and apply style to various HTML elements.

- 2.1. Styling Backgrounds
- 2.2. Styling Text
- 2.3. Styling Fonts
- 2.4. Styling Links
- 2.5. Styling Lists
- 2.6. Styling Tables

**Module 3:**

**CSS Box Model** - The CSS box model refers to how browser engines model HTML components and how the dimensions of those HTML elements are obtained from CSS properties. This lesson will give a clear understanding of the CSS box model and a detailed explanation of the different parts of the box model.

- 3.1. CSS Dimension
- 3.2. CSS Borders
- 3.3. CSS Outline
- 3.4. CSS Margin & Padding
- 3.5. CSS Height and width

**Module 4:**

**CSS Advanced** - It's time to explore more CSS tools and techniques that can help create modern websites.

- 4.1. CSS Grouping/Nesting
- 4.2. CSS Overflow
- 4.3. CSS Display & Visibility
- 4.4. CSS Position
- 4.5. CSS Float
- 4.6. CSS Alignment
- 4.7. CSS Transforms
- 4.8. CSS Transitions
- 4.9. CSS Animations
- 4.10. CSS Navigation Bar
- 4.11. CSS Image Gallery
- 4.12. CSS Image Opacity
- 4.13. CSS Image Sprites
- 4.14. CSS flexbox
- 4.15. CSS Media Queries

**Activity 3:**

Add CSS to your web page - Now add CSS to your web pages, created in activity 2, Also create an external CSS file and preview it with a web browser. Ensure to do this correctly, so your HTML and CSS files are connected and syntax error-free.

## Part 3: Creating page Layout and Site Design

**Module 1:**

**Code commenting in HTML and CSS** - Comments is essential for coding because they help the author of the code and other developers understand it better. comment ing is a good practice that should be adopted by developers. It's important for students to learn about the Function and Usage of HTML and CSS Comments. So in this lesson, students will learn various ways of adding comments to an HTML markup document and CSS style sheet.

- 1.1. HTML comment
- 1.2. CSS comment

**Module 2:**

**Web Page Layouts** - The layout of a website is an important aspect of web design. Students will learn about the components of web page layouts, And how to create a well-structured web page with HTML and CSS.

- 1.1. Div
- 1.2. Building layouts with CSS

**Module 3:**

**Responsive Web Design** - A good website should pay attention to accessibility and great user experience; Now this is where responsive design comes in. This lesson will cover fundamental design requirements needed to create a user-friendly website, and how to achieve a responsive design with HTML elements and CSS.

3.1. Introduction to Responsive Web Design

3.2. HTML viewport meta tag

3.3. CSS Media queries

3.4. Responsive images and videos

**Activity 4:**

Create a responsive webpage - Create a simple web page with a responsive layout. Chose any layout design of your choice.



## Git and GitHub

### Course Objective:

Using comprehensive practical concepts, students will learn to keep track of different versions of codes using a popular version control system (VCS) called Git. By the end of this course, students will emerge with a solid understanding of Git and Github concepts and hands-on experience on this platform and will be able to store and track code history in Git and collaborate with others in Github.

### Module 1:

**Version Control System(VCS)** - Starting from the basics of the overall theory concepts for the version control system, this course will begin with an introduction and overview of the version control system. In summary, this will cover a complete understanding of what a version control system is.

### Module 2:

**Command Line Interface (CLI)** - Students will need to at least know the basics of the Command line interface in order to use Git. In this lesson, students will gain an understanding of how to use the command-line interface to execute text-based commands and learn how to use some basic CLI commands.

### Module 3:

**Git and Github Introduction** - Here we get down to an introduction of how Git and GitHub works. This lesson covers a complete understanding of the relationship/ differences between Git (Local repository) & GitHub(Remote repository), and their purposes.

3.1. What is Git

3.2. What is Github

3.3. Understanding the difference between Github.

### Activity 1

Download and Install Git

Get a Github account.

### Module 4:

**Working with Git** - This covers the installation and configuration of Git. Furthermore, students will learn about the most commonly used Git commands, such as add, commit, init e.t.c.

4.1. Git Installation and configuration.

4.2. Git command and operation.

4.2.1. Git config.

- 4.2.2. Git init.
- 4.2.3. Git add.
- 4.2.4. Git diff.
- 4.2.5. Git commit.
- 4.2.6. Git reset.
- 4.2.7. Git status.
- 4.2.8. Git merge.
- 4.2.9. Git push.
- 4.2.10. Git pull.
- 4.3. How to Create and Initialize a local Git repository.
- 4.4. Git commands explained with Demo.

**Module 5:**

**Working with Github** - In this lesson, students will be introduced to GitHub and learn how it works with Git. students will learn how to create new repositories, add existing projects to GitHub, and clone repositories.

- 5.1. Creating a GitHub account.
- 5.2. Working with Repositories
- 5.3. How to add an existing project to GitHub.
- 5.4 Cloning.

**Module 6:**

**Working with Branches** - This lesson covers how to create branches, add, remove and merge branch concepts with practical implementations.

**Module 7:**

**Collaborating on Github** - Collaboration tools and features available in Github will be explored.

**Module 8:**

**Deleting Files and Reverting Mistakes** - Finally students will learn how to roll back, revert, and generally undo almost any mistakes in Github and local Git repository.

**Activity 2**

Add and track your HTML and CSS project with Git.  
Create a repository in Github and upload the HTML and CSS to the repo.



JS

## Java Script

### Course Objective:

In this JavaScript(JS) Course, students will learn about some JavaScript fundamentals, Understand how JavaScript works, Learn how to embed JS in HTML and CSS, and dive into JavaScript jQuery Library. At the end of this course, students should be able to use JavaScript programming skills to build dynamic and interactive web projects.

### Module 1:

**Introduction** - This lesson is an introduction to JavaScript history, basic constituents, and application of JavaScript program. Students will learn what Javascript is, Javascript syntax, how to add javascript code to HTML, defining Javascript variables. Examples of how to perform some basic JavaScript functionality.

- 1.1. JavaScript Overview
- 1.2. JavaScript Syntax
- 1.3. JavaScript comments
- 1.4. Embedding Script In HTML File
- 1.5. Defining variables and constants

### Activity 1

JavaScript Interactivity Experiment :

Display javascript interactivity with dialog function boxes; Alert, Confirm, and Prompt.

### Module 2:

**JavaScript data type** - This lesson entails a good understanding of Javascript primitive and non-primitive data types, keywords, and reserved words.

- 2.1. primitive data types - String, Number, Boolean, Undefined, Null.
- 2.2. non-primitive data types - Object, Array.
- 2.3. JavaScript Keywords and Reserved Words

Module 3: Operators - Students will learn about types of operators in javascript, their syntax and operator precedence.

- 3.1. Arithmetic
- 3.2. Operator Precedence in JS arithmetic operation.
- 3.3. Logical
- 3.4. Comparison
- 3.5. Assignment
- 3.6. Conditional

**Module 4:**

**Debugging and Troubleshooting JavaScript**- Students will learn basic methods of debugging in JavaScript. Every modern browser has developers tools available within it to debug code. Students will learn how to use these browsers dev tools.

- 4.1. What Is Debugging?
- 4.2. Tools for Debugging Code
- 4.3. Developer console
- 4.4. Testing Code in Various Browsers
- 4.5. Debugging Logic Errors

**Module 5:**

**JavaScript Events** - In this lessons students will learn about JavaScript event and even handlers, and how it works. Further more they will get a practical knowlegde of how event handler attributes, with JavaScript code can be added to HTML elements.

- 5.1. Understanding Events and Event Handlers
- 5.2. Overview of some commonly use events and events handler
  - mouse events
  - keyboard events
  - form events
  - document/window events.

**Module 6:**

**JavaScript Functions** - This lesson discusses functions and methods and how to work them in JavaScript code. Students will learn about JavaScript function syntax, how to create JavaScript Functions with Variable arguments, passing data to functions, and the return keyword.

- 6.1. What are Javascript Functions?
- 6.2. Defining and Calling a Function
- 6.3. Function Parameters
- 6.4. Returning Values from a Function
- 6.5. Types of Functions

**Module 7:**

**Conditional Statement & Looping Statement** - Students will learn how to use conditional statements syntax to control the flow of a program in JavaScript, how to use looping statement syntax to execute blocks of code multiple times.

- 7.1. If
- 7.2. If Else
- 7.3. Switch
- 7.4. While
- 7.5. Do/while
- 7.6. For
- 7.7. Switch

**Module 8:**

**JavaScript Objects** - This lesson is a detailed explanation of JavaScripts objects, and their syntax. Students will learn how to create and work with objects.

- 8.1. Introduction to Javascript Objects

- 8.2. Number
- 8.3. Boolean
- 8.4. String Object
- 8.5. Array Object
- 8.6. Date Object
- 8.7. Math Object
- 8.8. Javascript - RegExp

**Activity 2:**

Addin Javascript codes to HTML document

A practical on how to use Javascript code to create an interactive form and for the form validation.

**Module 9:**

**Javascript - HTML DOM and BOM** - This lesson covers the basics of the Document Object Model (DOM) and Browser Object Model (BOM) and both can be used to create in JavaScript to create dynamic UI elements. Students will learn how to manipulate the content, structure, and style of a website.

- 9.1. Understanding the Document Object Model Tree and Nodes
- 9.2. Exploring HTML Document Object Model
  - 9.2.1. Basic DOM Method Manipulations with examples
  - 9.2.2. How To Access and make changes to Elements in the DOM
  - 9.2.3. How To Modify Attributes, Classes, and Styles in the DOM
  - 9.2.4. Javascript DOM Events
- 9.3. Exploring The Browser Object Model

**Module 10:**

**Javascript Libraries** - In this lesson students will be introduced to Javascript libraries. they will get an understanding of what libraries are, and learn about the benefits of the jQuery, how to use the jQuery open source Javascripts library to easily add interactivity, animation, and more to webpages.

- 10.1. Libraries Overview
- 10.2. JQuery
- 10.3. Introduction to jQuery
- 10.4. jQuery Syntax
- 10.5. jQuery Selectors
- 10.6. jQuery Events
- 10.7. jQuery Effects
- 10.8. jQuery HTML
- 10.9. jQuery Traversing

**Activity 3:**

Frontend Development Project

Come up with a simple website idea and build it out with HTML, CSS, and Javascript. Use JQuery Library, and track your project with Git. Try to achieve the following on your website.

Has a navigation bar, the main content section, and a footer

Has at least three pages.

Design is mobile responsive



## Web Development with Python Program

### Course Objective:

This course is intended to teach the basics of Python Programming Language and some advanced concepts. In this course, Students will learn how to use Django web framework to create websites. Although this course focuses on Python for web development, it does include a quick overview of Python web scraping for data science.

## Part 1: Python Programming

### Module 1:

**Introduction and getting started with Python Programming** - The history and applications of the Python Programming Language are covered in this lesson. The basic principles of Python syntax are also covered in this session, as well as how to install and setup the Python environment.

- 1.1. Python Programming overview
- 1.2. Application of Python Programming
- 1.3. Setup of Python Programming
- 3.1. Getting Python
- 3.2. Installation of Python
- 1.4. Python Syntax.
  - 1.4.1. Indentation
  - 1.4.2. Comments

### Activity 1:

Running the first Python Program  
Write a simple Python program to Print Hello world!

### Module 2:

**Variables and Data type** - Student will learn what variables and data types are, types of variables and data types, declaration of data types and variable and, and some basic manipulations and operation that can be performed them.

- 3.1. Python variable
  - 3.1.1. What is a variable?
  - 3.1.2. Creating variable and assigning values
  - 3.1.3. Casting
  - 3.1.4. Variable case sensitivity
  - 3.1.5. Variable Types - Local and Global variables

## 3.2. Introduction to data types in Python

- 3.2.1. Python Numbers
- 3.2.2. Python String
- 3.2.3. Python Booleans
- 3.2.4. Python List
- 3.2.5. Python Tuple
- 3.2.6. Python Set
- 3.2.7. Python Dictionary
- 3.2.8. Checking Data type
- 3.2.9. Data types Conversion

### **Module 4:**

**Python Identifiers, Keywords, Reading Input, Output Formatting** - In this lesson, students will learn about python special reserved words, Identifier, reading and formatting users input and output.

- 4.1. What is an Identifier?
- 4.2. Keywords
- 4.3. Reading Input
- 4.4. Taking multiple inputs from user
- 4.5. Output Formatting

### **Module 5:**

**Operators in Python** - The aim of this lesson is for students to gain knowledge of how to perform computational and create logic statements using python operators.

- 5.1. Arithmetic Operators
- 5.2. Assignment Operators
- 5.3. Comparison Operators
- 5.4. Logical Operators
- 5.5. Operators Precedence.
- 5.6. Membership Operator
- 5.7. Identity Operators
- 5.8. Bitwise Operators

### **Module 6:**

**Python Flow Control** - To add decision making to a Python program, students will learn to build conditional expressions using the if statement and boolean expressions. They will also learn how to iterate with loop expressions. They will learn how control flow statements determine the order in which blocks of code are executed.

- 6.1. Introduction to Decision making
  - 6.1.1. if statement
  - 6.1.2. if...else statement
  - 6.2.3. elif statement
- 6.2. Introduction to loops
  - 6.2.1. for Loop
  - 6.2.2. while Loop
  - 6.2.3. Break, continue and pass statement

**Module 7:**

**FUNCTIONS** - Students will learn all about user-defined functions, and functions that are readily available for use (built-in functions), and how to use them. Also this sections will cover python modules and packages.

- 7.1. Types of Function - User-define and built-in functions.
- 7.2. Creating a Function
- 7.3. Function Calling
- 7.4. The return statement
- 7.5. Arguments in function
- 7.6. Passing by Reference versus Passing by Value
- 7.7. The pass Statement
- 7.8. Recursive Function
- 7.9. Lambda Function
- 7.10. Anonymous Function
- 7.11. Global, Local and Nonlocal
- 7.12. Python Global Keyword
- 7.13. Python Modules
- 7.14. Python Package

**Modulen 8:**

**Arrays** - Students will learn how to create and use an array to store items in contiguous memory locations. In addition, they learn about array operations.

- 8.1. What is an array
- 8.2. Array operations/Methods
- 8.3. Accessing array elements
- 8.4. Finding the length of an array
- 8.5. Looping Array Elements

**Module 9:**

**CLASSES AND OBJECTS** - In this module students will learn about some principles of python object-oriented programming system and functionality.

- 9.1. What is an Object?
- 9.2. What is a Class?
- 9.3. Creating a Class
- 9.4. Creating an object
- 9.5. Self Parameter
- 9.6. \_\_init\_\_ method

**Module 10:**

**REGULAR EXPRESSION** - This is all about the Python built-in package which can be used to work with Regular Expressions.

- 10.1. What are regular expressions?
- 10.2. Metacharacters
- 10.3. match() function
- 10.4. search() function
- 10.5. re.match() vs re.search()
- 10.6. findall() function
- 10.7. split() function
- 10.8. sub() function

**Module 11:**

**EXCEPTIONS** - Student will learn about exception handling, and how to use python Exception and clause to prevent disruption of code execution.

- 11.1. What is Exception?
- 11.2. Handling an Exception
- 11.3. The except Clause with No Exceptions
- 11.4. The except Clause with Multiple Exceptions
- 11.5. The try-finally Clause
- 11.6. Raising an Exception

**Module 12:**

**File Handling** - Lessons on file handling are covered in this section. How to read and write files, as well as a variety of other file-handling options.

- 12.1. Opening and Closing Files
- 12.2. The open Function
- 12.3. The file Object Attributes
- 12.4. The close() Method
- 12.5. Reading and Writing Files
- 12.6. The write() Method
- 12.7. The read() Method

## PART 2: SQL (Structured Query Language)

**Course Objective:**

In part 2 of this course student will be learning about the Structured Query Language(SQL). The objective of this SQL course is to provide basic and concepts of SQL. At the end of this course, students will learn how to use SQL to create database and perform operations on the records stored in the database.

**Module 1:**

**Introduction to Database** - This lesson covers an introduction to what a database is and what it is used for.

**Module 2:**

**SQL Overview** - This lesson will cover the fundamentals of SQL, which include, SQL syntax, Data types, commands, and clauses.

- 2.1. SQL Syntax
- 2.2. SQL Data Types
- 2.3. SQL Commands
  - 2.3.1. Data Definition Language(DDL) - Create, Alter, and Drop
  - 2.3.2. Data Manipulation Language(DML) - Insert, Update, and Delete
  - 2.3.3. Data Query Language(DQL) - Select
  - 2.3.4. Data Control Language(DCL) - Grant and Revoke
- 2.4. SQL Clause

**Module 3:**

**Database management systems and RDBMS** - In this lesson, students will learn about Database Management Systems with examples, and basic concepts of Relational Database Management Systems (RDBMS).

- 3.1. Overview of Database management systems
- 3.2. Examples of modern Database management systems
- 3.3. Overview of RDBMS
- 3.4. SQL RDBMS Concepts -
  - 3.4.1. What is a table?
  - 3.4.2. What is a field?
    - 3.4.3. What is a record/row?
    - 3.4.4. What is a column?
    - 3.4.5. What is Null Value?
    - 3.4.6. Primary key.
    - 3.4.7. Foreign Key.
    - 3.4.8. Unique Key.

## **PART 3: Django Python Web Framework**

**Course Objective:**

Django provides you with the foundation to build your website or web application easily by taking care of the most common tasks such as URL routing and database queries. This course is designed to help students understand and build simple web applications using the Django web framework for python.

Module 1: Django introduction and getting started with Django: An overview of Django features and understanding the Django environment.

- 1.1. Django overview
- 1.2. Setting up a Django development environment.
- 1.3. Setting Up a Database

**Module 2:**

**Django Project:** The process of creating Projects and applications in Django will be covered here. Also, description of files/folders within the Django project directory, and How to set up a database.

- 2.1. Starting a Project.
- 2.2. An overview of settings.py
- 2.3. The development Server and preview the project in the browser
- 2.4. Creating an application.
- 2.5. Setting up a database for a Django project.

**Activity 1:**

Creating your first application - A simple blog application  
Create a project in Django.  
Start a blog application



**Module 3:**

**Django Application Data schema:** This session will explain what a model is, how it is declared, and some of the main field types. Furthermore, it includes a description of some of the ways main ways model data can be accessed.

- 3.1. Django models
- 3.2. Defining and working with Models
- 3.3. Creating and applying migrations

**Activity :**

Creating model  
Defined a model for blog post  
Apply migrations

**Module 4:**

**Django Administration Site:** Lesson on how to create a simple administration site, with the built-in administration interface. Also, explore the admin interface.

- 4.1. Creating superuser
- 4.2. Django administration site
- 4.3. Users, Groups and Permissions
- 4.4. Adding and customizing model in the administration site.

**Activity:**

Exploring the Admin site  
Preview the administration site in the browser and perform some customization.

**Module 5:**

**Views and URLs Configuration:** This lesson will cover views and how to create them. Students will learn all about generic class-based views, function-based views. In addition, they will learn about URL handling.

- 5.1. list and detail view
- 5.2. Function-Based Views
- 5.3. Class-Based Generic Views
- 5.4. Adding URL patterns for views
- 5.5. Working with different types of HTTP Methods

**Module 6:**

**Django Static and Template Files:** Templates in Django store the HTML for our web pages. This lesson will teach how they function and how to make them. The lesson will also cover how Django Template Language allows the use of Python elements in a Django project.

- 6.1. Working with Template Files
- 6.2. Injecting dynamic content from View to Template
- 6.3. Django Template Language
- 6.4. Template Tags and Filters
- 6.5. Template loading
- 6.6. Working with Static Files

**Activity:**

Creating list and detail views and creating the first page.  
creating a view to display the list of posts.  
create a view to display a single post.

**Module 7:**

**Form Handling in Django:** In this tutorial, we'll show you how to work with HTML Forms in Django.

- 7.1. Creating a Form
- 7.2. Getting Data from request object
- 7.3. Processing the Submission
- 7.4. Customizing form design
- 7.5. Creating Forms from Models
- 7.6. Image/files uploading

**Activity:**

Creating a simple form.  
Create a comment form or a contact form

**Module 8:**

**Users Registration and Authentication:** In this lesson, students will learn how to manage users accounts and how to control their permissions.

- 8.1. User Objects
- 8.2. User Authentication in Django
- 8.3. Authentication Views
- 8.4. Authenticating Data in templates
- 8.5. Customizing authentication
- 8.6. Managing Users, Permissions and Groups
- 8.7. Profiles
- 8.8. Cookies

**Module 9:**

**Django's email functionality:** This lesson covers how to configure SMTP settings, and how to send emails with Django.

- 9.1. Configuring email settings
- 9.2. Sending emails with Django

**Module 10:**

**Deploying Django to production:** It's time to learn how to deploy a Django project. This lesson provides an overview of how to deploy a Django website project and all that is needed to get a site ready for production. Furthermore, this lesson will cover detail of how to push the project to Github, and a web host, for example, Heroku, PythonAnywhere.

**Project:**

Test your Django skill.  
Develop a Django project. Project ideas: Chat application, Dictionary Application, Django Blog, Ecommerce Store, Social Networking App, Library Management System, To-Do App.  
Push project to GitHub, and a web host platform.



# React Native

## Course Objective:

Learn to create and deploy responsive, engaging cross-platform apps using React Native. In this course, students will learn how to develop React applications that run on both iOS and Android devices, incorporate native APIs, and how to get the app ready for the Google Play Store and the App Store.

## Module 1:

**Introduction to React-** By the end of this lesson, students will learn the basics needed to kickstart react native development. Learn about core concepts like components, JSX, state management in components, component interaction using props and events.

- 1.1. What is React
- 1.2. JSX
- 1.3. React Components
- 1.4. Props
- 1.5. Events
- 1.6. State
- 1.7. Lifecycle
- 1.8. PropTypes
- 1.9. Default Props

## Module 2:

**Introduction to React Native** - By the end of this module you will learn the fundamental differences between web and native, how to set up the environment and create a first react native application using expo and react-native CLI.

- 2.1. An overview of the architecture of React Native.
- 2.2. React vs. React Native
- 2.3. Overview of Cross-platform mobile development
- 2.4. Setting up the development environment
- 2.5. Installing React Native
- 2.6. iOS setup – XCode
- 2.7. Android setup – Android Studio
- 2.8. The Expo command line interface (CLI)
- 2.9. React Native CLI

## Activity 1:

Creating a simple Simple Hello world app.

Creating And Running HelloWorld React Native in iOS and Android simulators

## Module 3:

**React Native Fundamentals** - By the end of this lesson, students will learn about core react native fundamentals, different React Native components and their application, and how to

setup and configure React Native navigation library.

- 3.1. Overview React Native Components with examples
- 3.2. Writing views in JSX
- 3.3. Passing Props to components
- 3.4. Establishing a layout with View
- 3.5. Displaying text with Text
- 3.6. Accepting user input with TextInput
- 3.7. Adding images with Image
- 3.8. Making components interactive with TouchableHighlight
- 3.9. Displaying data with ListView
- 3.10. Navigation
  - 3.10.1. What is Navigation
  - 3.10.2. Setting up React Native navigation library
  - 3.10.3. Working with React Native navigation

#### **Module 4:**

**Working with Styles & Layout** - By the end of this lesson, students will learn how to apply styles in React Native, gain understanding of flexbox and learn how to develop different kinds of layouts in React Native. Furthermore, they will learn about styling text, images and debug styles.

- 4.1. Exploring Styles and using styles
- 4.2. Inline Styles, Style Objects, Stylesheet
- 4.3. Exploring layout
- 4.4. Understanding Box model
- 4.5. Understanding FlexBox model
- 4.6. Styling Text
- 4.7. Styling Images
- 4.8. Debugging Styles
- 4.9. Styling the navigator

#### **Module 5:**

**React Native APIs** - By the end of this lesson students will learn how to make use of React Native API to access hardware related features and platform specific features.

- 5.1. What are React Native APIs
- 5.2. Working with remote APIs using Fetch
- 5.3. Handling permissions
- 5.4. Geolocation
- 5.5. Alert
- 5.6. Vibration
- 5.7. Accessing stored photos with CameraRoll
- 5.8. Adding animations

#### **Module 6:**

**Deploying The Apps:** You will learn how to publish your android app to the most commonly used store "Google Play". Apple Store (iOS) You will learn how to publish your iOS app to AppStore.

- 6.1. Deploying App on Apple App Store
- 6.2. Deploying App on Google Play Store



# Graphic Design

**Objective.**

This course will cover an overview of what designing tools (graphic design) and how to create professional design for branding and promoting business. Students will be taught how to create design with any of the following software: Corel draw, Photoshop. Student will learn how to utilize any devices to create design. Students will be introduced to at least one mobile friendly software for creating designs.





# Photoshop

## Course Objective :

This course will teach students how to use Adobe Photoshop to create beautiful, professional projects and designs.

### Module 1:

#### Introduction to Graphic Design

- 1.1. Introduction
- 1.1.Types of designing tools.
- 1.1.The principle of design.
- 1.1. The element of design.
- 1.1. Introduction to a graphic design software

### Module 2:

#### Introduction to Photoshop

- 2.1. What is Photoshop
- 2.2. Getting Acquainted with the Photoshop environment.

### Module 3:

#### Basic image manipulation

- 3.1 Spot Healing brush
- 3.2 History Brush
- 3.3 Clone Stamp
- 3.4 Content-Aware Fill
- 3.5 Curves and Levels

### Module 4:

#### Color basics

- 4.1. Painting Tools
- 4.2 Brush Settings
- 4.3 Color Theory

### Module 5:

#### Making and working with selections

- 5.1 Pen Tool
- 5.2 Quick Selection Tool

**Module 6:  
Filling and stroking**

**Module 7:  
Layers & Mask**  
7.1 Working with Layers  
7.2 Blending Modes  
7.3 Adjustment Layers  
7.4 Clipping Masks

**Module 8:  
Text**  
Alignment  
Tracking  
Kerning  
Leading

**Module 9:  
Drawing**

**Module 10:  
Using Channels and Masking**  
Masking techniques

**Module 11:  
Vector Drawing Techniques**

**Module 12:  
Preparing Files for the Web**

**Module 13:  
Producing and Printing Consistent Color**

**Module 14:  
Printing and Exporting Your Work**



**Project**

Animating GIF images for the web  
Design an Infographic in Photoshop  
Design for social media branding and posts  
Design flyers and other Advertisement materials  
Design business card  
Design logos

Photoshop Learning outcomes.

At end of this course, students will learn:

- Image Editing and Manipulation
- Typography
- Drawing
- Professional use of colors
- Preparing File for web and printing.
- Creating professional graphics for social media, advertisement, business branding and more.



## Canva

### Course Objective :

In this course students will learn how to easily create amazing, beautiful, professional graphic designs inside canva with any device. Students will learn to use Canva flexible design templates and provide the correct layout for your target destination.

#### Module 1:

##### Introduction to Graphic Design

- 1.1. Introduction
- 1.1.Types of designing tools.
- 1.1.The principle of design.
- 1.1. The element of design.
- 1.1. Introduction to a graphic design software

#### Module 2:

##### Introduction to canva

- 2.1. What is canva
- 2.2. Canva designs and templates

#### Module 3: Adding text.

#### Module 4: Text and Typography

#### Module 5: Working with colours.

#### Module 6: Adding images and Editing images

#### Module 7: Saving and exporting your work.

#### Module 8: Layouts.

#### Module 9: Shapes.

#### Module 10: Illustrations, icons, and lines.

**Project**

Design for social media branding and posts

Design flyers and other Advertisement materials

Design business card

Design logos

Creating animations

Canva Learning outcomes.

At end of this course, students will learn:

- Text and Typography
- Using shapes and lines
- Adding icons and Illustrations
- Working with pictures and filters
- Working with colors.
- Saving and exporting work
- Creating professional graphics for social media, advertisement, business branding and more.



## COREL DRAW

### **Module 1: Introduction to the Graphic Design**

- 1.1. The Elements of Design
- 1.2. The Principles of Design

### **Module 2: Getting Started with CorelDraw**

- 2.1. Explore/navigate the CorelDraw environment.
- 2.2. Opening a new document.
- 2.3. Saving a document.
- 2.4. Size Calculations for designs

### **Module 3: CorelDraw tools and functions.**

### **Module 4: Shapes and Lines**

- 4.1. Basic Shapes
- 4.2. Working with paths
- 4.3. Modify paths

### **Module 5: Colour**

- 5.1. Fills and Outlines
- 5.2. Custom fills
- 5.3. Custom Strokes
- 5.4 Creating of backgrounds

### **Module 6: Working with objects.**

- 6.1. How to use the shape tool to curve and shape objects
- 6.2. How to use the pick tool to rotate, resize and increase objects
- 6.3. How to weld and trim objects.

### **Module 7: Working with text**

- 7.1. Text objects
- 7.2. Text effects

### **7.3. Managing Space When designing**

### **Module 8: Layers**

- 8.1. Creating new layers
- 8.2. Manipulating layers

### **Module 9: Bitmaps**

- 9.1. Import and adjust bitmaps
- 9.2. Trace bitmaps
- 9.3. Applying Power clip

# Digital Marketing



The aim of the Digital Marketing Course is to provide students with the knowledge about business advantages of the digital marketing and its importance for marketing success; to develop a digital marketing plan; to make SWOT analysis; to define a target group; to get introduced to various digital channels, their advantages and ways of integration; how to integrate different digital media and create marketing content; how to optimize a Website and SEO optimization; how to create Google AdWords campaigns; social media planning; to get the basic knowledge of Google Analytics for measuring effects of digital marketing and getting an insight of future trends that will affect the future development of the digital marketing. The application of the knowledge, skills and competences gained will help future managers to develop digital marketing plans to manage a digital marketing performance efficiently.

## Learning Objectives:

By the end of the course, students will be able to:

- Understand Digital Marketing Why Digital Marketing
- Understanding Inbound Digital Marketing Concepts Implementation
- Identify Important Digital Marketing Channels
- The 5 D's of Digital Marketing
- Understanding Digital Marketing Strategy
- 5 Steps To Developing A Powerful Digital Marketing Strategy
- Understanding Web Analytics and How Web Analytics Works



# Digital Marketing

## Module 1 -

### Introduction to Digital Marketing

In this module, we will explore the history and evolution of advertising and marketing. We will break down the tenets of Advertising and how it relates to Digital Marketing

Key Learning Outcomes

History of Marketing

Traditional Advertising

Digital Marketing vs Traditional Advertising

Channels & Platforms in Digital Marketing

## Module 2 -

### Digital Marketing Strategy

In this module, students will be provided with the framework to help them understand marketing at a fundamental level. We'll look at Digital marketing in both B2C and B2B contexts and how to develop a great creative strategy that sells.

Key Learning Outcomes

Creative Strategy

Digital Marketing Strategy

Understanding your Product/Brand

Understanding your Consumer

Setting Objectives & KPI's

## Module 3 -

### Content Marketing

In this course, students will learn how to plan content marketing, how to develop content that works well for the target audience, and how to measure its impact. Students will learn Social Media Marketing hacks like Trendspotting, Viral Marketing and how to leverage Digital Trends for campaign success.

Key Learning Outcomes

Storytelling & Copywriting

Content Plan Development

Social Media Management

Influencer Marketing

Trendspotting, Viral Marketing & Empowerment Marketing

**Module 4 -  
Social Media Management**

In this module, students will learn more about the main social media platforms, how to manage brand social media presence, and how to create effective content for each platform. As a prospective brand and marketing specialist, it is important that students understand how to use social media for brand growth.

Key Learning Outcomes

Insights on social media

Developing strategies for Social Media marketing on WhatsApp for Business, Facebook, Twitter, YouTube & Instagram

How to Build a social media Calendar

**Module 5 -  
Email Marketing**

In this module, students will learn how email is an effective marketing channel, especially at the conversion and retention stage of the customer journey. Also in this course, students learn how to create an email marketing strategy, create, and execute email campaigns, and measure the results.

Key Learning Outcomes

What is Email Marketing and how it works?

Components of Email Marketing

Email marketing success metrics

Building an email database & lead magnet

**Module 6 -  
Search Engine Optimization (SEO)**

Students will learn how to optimize search engine presence through on-site and off-site activities, including how to develop target keyword lists, optimize website UX and design, and execute a link-building campaign.

Key Learning Outcomes

On-page and Off-page SEO

Link Building

Keyword Research

Inbound Marketing

**Module 7 -  
Data Analytics & Reporting**

Here students will learn how to track actions that happen online and how they impact a business. Also in this module, students will learn how to use different analytics to evaluate the audience, measure the success of acquisition and engagement efforts, evaluate user's conversions to set goals, and use those insights for future marketing plans.





# LIFE and Soft Skills

## Course introduction

Soft skills or core skills are skills which are desirable in all professions. They are character traits and interpersonal skills that characterize a person's relationship with other people. Soft Skills can also be described as a person's emotional quotient.

## Course Aim

To help target groups remain employed and advance in the workforce

## Course Objectives

- To give learners a realistic perspective of work and work expectations
- To help formulate problem solving skills
- To guide learners in making appropriate and responsible decisions
- To help learners create a desire to fulfill individual goals
- Instructional methods
- Active learning: learners should be engaged in the instructional process by having them read materials which include real life situations.
- The class then analyzes and discusses the material. Reflecting through the use of famous quotes and developing analytical skills through small group problem solving activities.

# LIFE and Soft Skills

## Module 1; Time Management

What is time management

Participants should know the process of planning and exercising conscious control of time spent on specific activities

How to organize your time

Participants should know how to eliminate low value activities and use time saved to do high value activities

Ways to improve time manage

Staying organized can help maintain a clear picture of what one needs to do and when

Essential time management skills

Planning ahead, blocking out distractions, creating balance, getting good rest and by rewarding yourself

Tips to improve time management skills

Importance of good time management skills

Time management helps one to prioritize tasks so that one can ensure they have enough time available to complete every project

## Module 2; Self awareness

What is self awareness?

Having a better knowledge of oneself and how one might react under certain event

SWOT Analysis

Participants should know their strengths, weaknesses, opportunities and threats.

Participants should write down at least 3 of each above and try to work on them.

Emotional intelligence

Participants should know the ability to understand, use, manage and handle emotions at any given time.

Participants should be given situations and asked what emotions they would show under such situations

Self esteem

Participants should be able to know how they feel about themselves. they should be taught about having a healthy self esteem and to think good about themselves.

## Module 3; Etiquette and respect

What is etiquette

Participants should be taught about formal manners and rules that are followed in social or professional settings

Respect as a two way street

Participants should know that it shouldn't matter where the other person has been, where they come from or who they are , your interactions with them should be filled with respect and courtesy

The A to Z of etiquette (Rules of Etiquette)

Participants should be taught basic rules of etiquette such as saying Thank you, sorry, speaking with kindness, having empathy and always being on time for events

Types of etiquette

Participants should know about different types of etiquette such as social etiquette, rest room etiquette, telephone etiquette , interview etiquette etc

How to learn proper courtesies of life

The importance of good manners

Common etiquette in our day to day lives

Exercises to show how good manners maketh man

#### **Module 4; Communication**

What is communication

Participants should know that communication is the act of using words, sounds, signs or behaviors to exchange information

Effective communication skills

Participants should learn how to convey information efficiently

Communication as an essential skill of the 21st century

Communication skill is generally used to refer to certain core competencies such as collaboration, digital literacy, critical thinking and problem solving

Types of communication

Participants should know the different types of communication such as verbal, nonverbal, visual and written. ( a game of pictictionary is introduced to participants to show them non verbal communication)

Ways to improve communication effective skills

Participants Should learn ways to improve their communication by writing out new words, getting their meaning and using them. Listening before speaking and also thinking before you speak.

Communication as a team

Teams that communicate effectively complete projects quicker and more efficiently than others

#### **Module 5; Goal setting**

What is goal setting?

Participants should be able to carefully consider what they want to achieve and know steps to take to achieve them

List 5 goals you will like to achieve before the end of the year

Strategies of goal settings

The most important thing is to have smart goals

How to set SMART goals

Goals must be Specific Measurable Attainable Relevant and Time bound

Goal setting tips

Goals should be written down, broken down, make them visible, and take action

Reasons why you should set goals

Example of personal development goals

Common mistakes in goal settings

Setting too many goals. Setting vague goals, setting negative goals, setting unrealistic goals.

Dos and don'ts of smart goals

Importance of setting goals

Goals provide direction and focus, they give a sense of personal satisfaction, they help maintain motivation and they allow us to prioritize

### **Problem solving**

What is problem solving

Participants should be able to identify a problem, determine the cause of the problem, identify, prioritize and select alternatives for solutions.

The problem solving loop

Participants should know the steps of solving problems by identifying the problem, determine root cause, develop alternate solutions, select a solution, implement the solution and lastly evaluate outcome

Steps and process involved in problem solving

Team work

Participants Should learn how to work in collaboration with others in order to achieve a goal.

The importance of teamwork

What makes a good team player ( characteristics of a good team player)

A good team player should be flexible, have a positive attitude, and commit to the team.

Participants should Carry out a team work activities

A simple game or task should be given to participants to measure their teamwork and problem solving skills

### **Creative Thinking**

Critical thinking

Participants should be able to look at problems or solutions from a fresh perspective that suggests unorthodox solutions

Creative thinking Techniques

Brainstorming

Elements of creativity

Importance of thinking outside the box

Give some puzzles and creative pictures to solve or interpret

### **Job Interview techniques**

What is an interview

Job interview tips

Keys to a successful interview( Before, during and after the interview)

Participants should research employer, prepare for common interview questions, sell yourself, dress the part, be punctual never go late for an interview

Proper interview etiquette

Common interview mistakes

Arriving late, not dressing the part, using of cell phone during interview, losing focus, talking too much, unsure of resume facts ect

How to answer interview questions

**Social responsibility**

What is meant by social responsibility

Participants should learn that individuals and companies have a duty to act in the best interest of their environment and society as a whole

Types of social responsibility

Individual and corporate social responsibility

How can one be a social responsible individual

The importance of joining youth associations

The little things one can do daily

Example and importance of social responsibility.

Importance of volunteering

The principle of donating time and energy for the benefit of others in the community.

Volunteering enables individuals to help others in a selfless way. Examples of volunteering include Mentoring, counseling, facilitating,youth work,event planning etc.

**Evaluation**

Evaluation should be based on class participation and change in participants as the weeks go by.



# Entrepreneurship Course

## Introduction

LIFE Legacy Entrepreneurship course is an exciting course designed to help young people realize their full potential through starting and growing their own businesses. Small businesses are enormously important—they serve as an engine of economic growth and as they grow, provide jobs to those in need. Paradigm Initiative developed this course to introduce young people to the basic ideas, actions and skills needed to successfully launch, lead and grow a micro or small business.

## Course Outcomes

At the end of this entrepreneurship course, the participants would be able to develop the skills that will help them have an eye for identifying needs and desires around them that can be turned into entrepreneurship opportunities. They will also develop the skills to Plan, launch and sustain their businesses.

## Course Objectives

The main goals of the entrepreneurship course are to help young people:

- Learn about how to launch and sustain their businesses
- Develop a better awareness of their capabilities and limitations in solving problems within their community
- Develop some ideas of how they can keep learning and improving their capabilities to solving problems in their community

## Entrepreneurship

The Entrepreneurship course consists of 11 modules. These modules include a variety of activities that teach learners the basic business skills required to create and operate a business. The skills introduced are designed to be enhanced by face-to-face activities led by a classroom facilitator and reinforced through hands-on, community-based activities. The activities are designed to be self-guided by the learner; however, facilitators should be present to support learners through this process. The Entrepreneurship course achieves its maximum impact with active facilitation throughout the course from qualified facilitators and hands-on activities realized by the learners. The 11 modules consist of approximately 22 instructional hours.

### Course Activity

The modules feature two types of activities:

- Tasks for learners to perform, including market simulations, case studies, interactive exercises;
- Hands-on assignments to complete in their local community.

### Guidelines for Facilitating the Modules

The following section provides a description of each of the 11 modules and detailed instructions for facilitating the face-to-face activities in each module.

#### MODULE 1:

##### **Shaping My Destiny**—How Can I Create My Own Employment Future?

###### Learning Objectives

Learners will develop strategies for obtaining information about job opportunities in the formal/non-formal sector, develop job seeking skills, and understand the job market.

Learners will identify what they could do to secure employment.

Learners will understand how their interests, skills and experiences might impact their ability to start and sustain a business

#### MODULE 2:

##### **Creating My Own Business** — What is My BIG Idea?

###### Learning Objectives

Learners will identify why it is important to have an idea and a sound plan.

Learners will generate business ideas, identify one that seems optimal, describe and justify their choice.



**MODULE 3:****Exploring the Market—What Is a Current Need Not Being Adequately Met?**

## Learning Objectives

Learners will understand how their interests, skills and experiences might impact their ability to start and sustain a business.

Learners will develop strategies for obtaining information about job opportunities, develop job seeking skills and understand the job market (but more emphasis on the ability to create business of their own).

**MODULE 4:****Financing my business** - Estimating startup costs & finding capital to start my business

## Learning Objectives

Learners will identify various sources of start-up capital, small loans/grants.

Learners will know how best to place themselves and their business to possible ways of accessing such financial opportunities.

Learners will familiarize themselves with what risk taking means and determine the level of risk they are comfortable with vis-à-vis their business.

Learners will use simple financial spreadsheets to create reasonable estimates for relevant start-up costs, initial income needs, and initial profits.

**MODULE 5:****Developing Something to Sell** — How Can I Develop a Suitable Product or Service?

## Learning Objectives

Learners will understand how to define and protect a product/service and to ensure compliance with relevant government regulations.

Learners will understand how to calculate an optimal price point for their product/service.

**MODULE 6:****Reaching Potential Customers** — How Can I Reach My Market?

## Learning Objectives

Learners will understand how to interpret an industry profile, analyze a market, engage in competitive analysis, and set prices.

Learners will describe and provide the key elements of a draft marketing plan for their business.

Learners will describe and employ basic marketing and branding concepts as they relate to their prospective business within a local context.

**MODULE 7:****Making the Sale**—How Can I Improve My Sales Skills?

## Learning Objectives:

Learners will understand what sale techniques they can use to sell their product or services.

Learners should understand how to use technology and social media to sell their product and services.

**MODULE 8:**

**Managing My Business**—How Can I Organize Myself and Who Else Do I Need to Help with Initial and Long-term Success?

Learning Objectives

Learners will develop realistic views of their own competencies, limitations, and recognize the skills they need in others.

Learners will create a clearly defined set of value statements that will guide their business and employees.

**MODULE 9:**

**Financial planning** - How can I keep records to know if my business is making a profit?

Learning Objectives

Learners will recognize basic financial statements and accounting procedures required to run a small business.

Learners will exercise appropriate judgment in determining when to do something alone and when the skills of others are required to achieve business success.

Learners will understand the importance of sound planning, including alternative business scenarios, contingency plans, and their implications to ensure that their businesses are making money

**MODULE 10:**

**Obtaining and Developing My Workforce** — How Can I Effectively Hire, Develop, And Manage Employees?

Learning Objectives

Learners will understand how to hire and manage effectively.

Learners will learn how to build managerial capabilities and articulate how they can improve or compensate for various competencies.

**MODULE 11:**

**Expanding My Business**—How Might I Further Expand My Business?

Learning Objectives

Learners will describe a set of conditions under which they could expand their business and what would be required for likely success in the event of such an opportunity.



# DIGITAL SECURITY

Main document of instruction: AYETA Digital Rights Toolkit (Available at [www.ayeta.africa](http://www.ayeta.africa))

Overall Course Objective: The Digital Security Course is intended to build the capacity of learners to be able to secure themselves while online. In this course, students will be exposed to the fundamentals of digital and physical security, digital hygiene practices, passwords and other access restriction methods, common password attacks, firewalls, encryption malware and ransomware among others.

## General Outcome:

At the end of the course, it is expected that students should be able to secure themselves and their devices while online and offline as well as be able to mitigate any digital and physical security threats that they may be exposed to. By successfully completing this course, students will be able to:

- Appreciate digital rights generally
- Understand the source of digital rights as human rights
- Secure themselves online and offline

# DIGITAL SECURITY

## DIGITAL RIGHTS

### **Module 1: Background**

- 1.1. What are digital rights?
- 1.2. Digital/Human Rights Charters, Declarations and Protocols
- 1.3. Digital Security Actors in Africa
- 1.4. Relevant Digital Rights Events in Africa

## DIGITAL SECURITY

### **Module 2: Digital Hygiene**

- 2.1. Practical Examples
- 2.2. Prevention of exposure to attacks
  - 2.1. Developing safe online habits
  - 2.2. Keeping Systems and Software up to date
- 2.3. Benefits of Digital Hygiene
- 2.4. Digital Hygiene Practices
- 2.5. Develop Safe Online Habits
- 2.6. Protecting your data
- 2.7. E-commerce

### **Module 3: Passwords & Authentication**

- 3.1. Strong passwords
- 3.2. Restricting access to a device
- 3.3. Password Generators
- 3.4. Password Managers
- 3.5. Storing several passwords
- 3.6. Common Password Attacks
- 3.7. Trying common passwords

## PHYSICAL SECURITY

### **Module 4: Physical Security**

- 4.1. Definition
- 4.2. Encryption of digital devices
- 4.3. Mitigation of physical security threats

## INTERNET SHUTDOWNS

### **Module 5: Internet Shutdowns**

- 5.1. Definition
- 5.2. Internet Shutdowns in Africa
- 5.3. Measuring Internet Shutdowns and Censorship
- 5.4. Advocacy against Internet Shutdowns in Africa
- 5.5. Circumventing Internet Shutdowns data in Africa
- 5.6. VPNs
- 5.7. Measuring internet shutdowns and censorship
- 5.8. Advocacy against shutdowns in Africa
- 5.9. The Cost of Shutdown Tool (COST)

