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# MPESA Mini Apps And API Development Course

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Full-Time Online classes

In partnership with:



# Introduction

**Introducing The Mini Applications Development Program, where innovation meets application! This is a pioneering initiative designed for aspiring developers in collaboration with Mpesa Africa.**

The Mini Applications Program is a new technology that helps businesses develop high-quality services and grow on mobile apps. Pioneered by Mpesa Africa, the aim of the program is to ensure a generalized concept that users can experience many services without installing many mobile apps on their phones.

In this course, learners will learn the fundamentals of creating basic web pages and style them using CSS and HTML. You will also gain skills in writing basic business logic using Javascript, JSON and understand basic XML language structure. At the end of the course you will experience a structured and practical pathway designed to transition them from an enthusiast to a junior Mini-apps software developer with MPESA Africa. **Join us to explore the world of cross-platform super applications and emerge with a portfolio of front-end projects, showcasing your expertise in mini-applications development.**

## Why Learn MPESA Mini Apps & API Development Course?

This course will take you from 0 to an experienced junior Mini Apps Software Developer with industry-relevant & practical skills.

### **Pioneering Mini-Apps Learning:**

Explore groundbreaking mini-applications development, a first in Africa, in collaboration with MPESA Africa, ensuring you stay at the forefront of industry trends.

### **Real-World Readiness:**

Partnering with MPESA Africa ensures a curriculum that aligns with industry needs, giving you practical insights and knowledge through access to industry-relevant labs and projects directly from the hiring partner.

### **Future-Ready Skills:**

Gain insight into cross-platform super applications, positioning yourself for success with a unique blend of industry collaboration, practical & project-based learning experience, and forward-looking tech skills.

### **Career Opportunities:**

A chance to work with MPESA Africa in the future Mini Applications Projects

### **Certification:**

A chance to get certified as a proficient mini-apps developer

# Why Study At Moringa?

Moringa is one of the most successful tech boot camps in Africa. Join us and get top-tier learning & student experience.



## Who is this course for?

If you are a recent university graduate, or student and looking to start your career in mini applications development you are encouraged to apply and start. No one is left out, even if you are switching from another IT field this is the right course for you!

## What are the requirements to join?

Have basic computer skills.	Proficiency in English both spoken and written.	Machine minimum specifications with Admin permissions -8GB RAM -256GB HDD SSD -Ubuntu or Mac (Special cases for Windows)	Functional understanding of at least one operating system (Windows, macOS) for Linux users, they can use platforms like wine to leverage the Windows IDE..	All classes are fully online. You are required to have access to a stable internet.	Must have a desire and curiosity to learn.	Availability to attend all classes.
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## Course Overview

**Duration** - 8 weeks

**Mode** - Full-time | Live Online Classes | Monday to Friday - 8 am to 4 pm  
(Live lectures and Technical mentor support)

**Tuition Fees** - Ksh 93,054

**Exams Fees** - Ksh 12,376

## Fee Payment Options Available



Upfront Full Fee Payment

# Pathways:

## BRONZE

### Introduction to Programming and Developer Tools

#### Expected Skill Set:

- Create basic web pages and style them (css, html)
- Write and understand basic business logic in Javascript
- Understand JSON
- Understand basic XML language structure

## SILVER

### UI Frameworks/(Intermediate Mini App Developer)

#### Expected Skill Set:

- Navigate API documentation, get an API key, and parse JSON.
- Protect API keys
- Understand mini app basic architecture
- Integrate a mini app with a backend service. (client server integration)
- Use libraries to rapidly develop Mini apps UI Solutions
- Create and reuse custom components
- Collaborate on a mini app project.

## GOLD

### Senior Mini apps Developer

#### Expected Skill Set:

- Research, pitch, design and build an MVP that resolves a tech-related problem statement
- Continue adding features to improve your project's functionality and user experience
- Manage mini apps deployment process
- Understand advanced JavaScript concepts
- Rapidly develop mini apps solutions
- Create complex mini app solutions with ease

# Curriculum Outline

## Week 1

### Developer Tools & Unix

- Introduction to command line in files and folders manipulation
- Introduction to Computer Science Fundamentals
- Command line & IDEs
- Linux OS file management system

## Week 2

### HTML, CSS, and Git

- Version control and GitHub Pages
- HTML page layout elements
- CSS basics
- Styling with classes
- Debugging HTML and CSS
- Responsive design and media queries

## Week 3

### JavaScript Fundamentals

- DOM manipulation and traversal
- Writing functions
- Business vs. user interface logic
- Control flows & Logical operators
- Variable scope (local scope, global scope, unscoped variables)
- Working with web forms (gathering user input using jQuery, working with different form inputs eg checkboxes, radio buttons and dates)
- DRY code (Don't Repeat Yourself) and Separation of UI vs Business logic.
- Debugging in JS (Using Chrome console debugging - console.log(), debugger keyword, pausing on exceptions)

# Curriculum Outline

## Week 4

### Object Oriented Programming and Introduction to Node

- Creating custom objects using literal notations vs constructors
- Introduction to JS prototypes and adding custom methods to prototypes
- Introduction to scoping and objects within objects
- Intro to object-oriented programming
- Constructors and prototypes
- Objects within objects
- Introduction to Node
- Basics of HTTP requests
- Computer Science Fundamentals: Algorithm design.
- Routing
- Hosting

## Week 5

### Front\_end Javascript and Intro to React

- Fundamentals of UI/UX
- Basic React components
- JSX basix
- React nodes and React components
- Client-Server relationship
- Networking and DNS
- Dependency Injection using Services in React (Creating and registering a service)
- Consuming an API (HttpClient, making HTTP requests, handling

# Curriculum Outline

## Week 6

### React Front-End

- Child components changing Parents component state
- Separating presentational components from display components
- React-State Management Framework - Redux
- Lifecycle Functions and other Best Practices
- HTTP responses, handling errors, using loaders)
- Routing in React (Configuring routes, RouterOutlet, RouterLink Active, 404 pages, redirecting users, passing parameters to routes)
- ReactJS
- Able to understand JSON
- Able to understand basic XML language structure

## Week 7

### Introduction to Mini-Apps

- Introduction to mini applications development.
- Understanding Mini Apps (Client-Server) Architecture
- Understanding the need and advantages of mini apps
- Understanding Mini apps basic Architecture
- Understanding Challenges of mini apps
- Understanding mini apps General Building Blocks

## Week 8

### Capstone Project

- Agile product development Presentation skills

## Contact Details



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