

EXPECTED PROSPECTS OF LEARNING FOR MOBILE APP DEVELOPMENT AT EMETACK

- Overview of mobile app development
- Types of mobile applications
- Choosing a platform(iOS, Android, Cross-platform)
- Programming languages(Java, Swift, Kotlin, C++, Objective-C)
- Variables, data types and operators
- Control structures(if-else, loops)
- User interface design
- User experience design
- Designing for different screen sizes and devices
- Setting up the development environment
- Building a simple mobile app
- Understanding app architecture and components
- Working with databases and storage
- Integrating APIs and third party services
- Testing and debugging
- Preparation for publication
- Publishing apps in app stores
- Maintaining and updating apps

PROGRAM FOR PROSPECTIVE APP

- User registration and profiles(sign up and login)
- Product showcase
- Search and filtering(location, product category, price range)
- Product reviews and ratings
- Integration
 1. Integration of APIs
 2. Payment gateway
 3. Bulk SMS
 4. PHP mailer
 5. whatsapp
 6. Google map locations
 7. AI
 8. Push notifications
 9. Other third party services
- Order management(
 1. Manage orders
 2. Track orders and payment
 3. Update order status
- Product recommendations(based on history and preferences)
- Producer-consumer messaging
- Product variants and provision of options
- Feedback and support
- Location based services

PROJECTED RUNNING OF THE COURSE

PLANNING AND DESIGN

1. PLANNING

Here, one must first choose and generate an original idea of what they would want their app to look like.

Considerations

- Logo; One must choose a visually striking logo that communicates for their brand as an app
- Color; the color in the app should be visually appeasing and striking
- Name; the name of the app should represent what you want your users to perceive of you app and should communicate to the target audience. It should also allow Search Engine Optimization(SEO) to optimize marketability

The making of the logo is done using Adobe tools and Fireworks. One must also make a website for the app using a domain name of the app so that the app is accessible via the web.

2. BUILDING THE APP FRAME AND INTERFACE

The app skeleton is built using HTML, CSS, Javascript and Bootstrap. The original frame is constructed using HTML since the app is to originally run on the web; the skeleton created at this point provided a crude overview of the

expected content of the app and framework for insertion of other functions.

CSS and Bootstrap provide beauty to the app in terms of coloring and structuring of the app interface. They also provide the app with responsiveness to various devices hence making the app more flexible in terms of screen sizes.

All the following is done using tools (IDEs) like NOTEPAD++, Visual studio code (VSC) etc.

One may also opt to use CMS for faster ways of developing this using templates and reverse coding.

DEVELOPMENT

DATABASE MANAGEMENT

After the app interface has been crafted, then the app needs to be connected to a database that handles user data. On this database, producers are able to upload information about their commodities which consumers are able to access. This database is built using SQL and is managed using a tool called XAMP.

In XAMP server, one is able to do back-end development so that the app is able to send a get request to the database or server for information and at the same time the server or database can extract information from the app for example login details.

To build the bridge between the app and the database, we use PHP and SQL but may add Ajax and JQuery to provide more functionality and logic to the app for example informing the user of wrong login details or already existing account in the database



HOSTING/ DEPLOYMENT

At this stage the app has gained some functionality though still lacking many functions and integrations. But before the addition of integrations, we must host the app on the web to test the functionality.

After hosting the app onto the web, it is now basically a web app and can only run on the website but not on the device locally. Also the database server is changed from XAMP to another that runs online.

DEALING WITH PWAs

Using Java and JSon, one can convert the web app into a Progressive Web App where it is able to install on the different devices and can run off the website. Any further changes made on the source files are automatically updated on the PWA so at this stage we have a simple mobile app.

INTEGRATIONS

The different integrations can now be added to the app in a process called manifesting. Here, the following may be added;

- APIs
- Payment gateways
- Bulk SMS
- PHP mailer
- AI
- Google maps locations
- whatsApp
- Other third party services

Every single stage here is followed by testing and debugging to iron out any possible errors in the code. This process is then followed by maintenance and updates where feedback and support, security and traffic management are integrated.

PUBLISHING THE APP

If the app now meets the objective and desires of the developer, it can be published in the different app stores or marketed to target clients.

DIGITAL MARKETING

The app can then be advertised so as to reach out to the target market.