Centre for Machine Learning and Intelligence

Multidisciplinary Course

Mobile Application Development

(Applicable for the PG Students admitted from 2022 – 2023 onwards)

Semester: III **Hours of Instructions / Week: 2**

Subject Code : 23MAIM04 **No. of Credits: 2**

Objectives:

1. To understand Android OS
2. To design and develop Mobile Appsin Android Studio
3. To run the developed apps in Android mobile phones

Unit 1: Introduction and Installation of Android **-6Hrs**

Introduction to Android - Android Overview, Why Android? - Features of Android, Android Application Categories, Android version history, Android Architecture, Prerequisites for Android Studio installation. Installing Android Studio – JDK (Java Development Kit) installation, Android SDK installation (Create Android Virtual Device.)*

Unit 2: Application Design Essential **-6Hrs**

Understanding Anatomy of Android Application, Android editor layout, Project file of the application, Android Manifest file, Java file of the application, Android Widgets, Attributes of the widgets, Building First Android application using Text View. Run the Application in the Virtual Device, Build APK file and install it in the Android mobile. Types of Android Layout Design – Linear Layouts, Absolute Layouts, Relative Layouts, Table Layout, (Frame Layout.)*

Unit 3: Application for Beginners **-6Hrs**

Develop an app using Text View, Develop an app using Button, Develop an app using Indent Activity, Develop an app using Image View, (Develop an app using Image Button)*

Unit 4: Condition based App Development **-6Hrs**

Develop a program using Multiple Activity Pages, Develop an app using IF...else, Develop an app using Math Operation, Develop an app using Function, (Develop an app using Switch case.)*

Unit 5: App Development using Other Widgets **-6Hrs**

Develop an app using Checkbox, Develop an app using Audio player, Develop an app using Video Player, Develop an app using Google Map, (Develop an app using Web View)*.

*** Indicates Self - Study Component**

Total Hours: 30

Reference Books

1. M. Krishnaveni, P. Subashini, B. Preethi, (2020), "***I am your Android – Volume I, Simplev Concepts***", Notion Press, Chennai, ISBN - ISBN-10: 1636330010, ISBN-13: 978- 1636330013.
2. M. Krishnaveni, P. Subashini, B. Preethi, (2020), "***I am your Android – Volume II, Advanced Concepts***", Notion Press, Chennai, ISBN-10: 1636330118, ISBN-13 : 978-1636330112.
3. John Horton , (2021), "***Android Programming for Beginners: Build in-depth, full-featured Android apps starting from zero programming experience***", Packt Publishing Limited; 3rdEdition

E-Learning Resources:

1. https://www.javatpoint.com/android-tutorial
2. https://www.youtube.com/watch?v=EknEIzswvC0&list=PLS1QulWo1RIbb1cYyzZpLFCKvdYV_yJ-E
3. https://www.tutorialspoint.com/android/android_network_connection.htm
4. https://www.geeksforgeeks.org/android-studio-tutorial/

Course Outcomes:

CO1: Know the functioning of Android OS and Android Studio Installation
CO2: Build and run their own Mobile Apps
CO3: Develop the mobile application using basic widgets
CO4: Implement mobile application using condition statements
CO5: Illustrate multimedia objects based mobile applications