Mobile Application Development (MAD - 22617)

Unit I: Android and its tools

Topics:
- 1.1 Introduction to Android:
  - Open handset alliance
  - Android Ecosystem.
- 1.2 Need of Android, Features Of Android
- 1.3 Tools and software required for developing an Android Application.
- 1.4 Android Architecture

Unit II: Installation and Configuration of Android

Topics:
- 2.1 Operating System, Java JDK, Android SDK
- 2.2 Android Development Tools(ADT)
- 2.3 Android Virtual Devices(AVDs)
- 2.4 Emulators
- 2.5 Dalvik Virtual Machine, Difference between JVM and DVM
- 2.6 Steps to install and configure Android Studio and SDK

Unit III: UI Components and Layouts

Topics:
- 3.1 Control Flow, Directory Structure
- 3.2 Components of a screen, Fundamental UI Design
- 3.3 Linear Layout; Absolute Layout; Frame Layout; Table Layout; Relative Layout

Unit IV: Designing User Interface With View

Topics:
- 4.1 Text View, Edit Text; Button, Image Button; Toggle Button; Radio Button And Radio Group; Checkbox; Progress Bar
- 4.2 List View; Grid View; Image View; Scroll View; Custom Toast Alert
- 4.3 Time And Date Picker

Unit V: Activity and Multimedia with Database

Topics:
5.1 Intent, Intent_Filter
5.2 Activity Lifecycle; Broadcast Lifecycle
5.3 Content Provider; Fragments

5.4 Service:
   - Features Of service, Android platform service, Defining new service,
     Service Lifecycle, Permission, example of service
5.5 Android System Architecture, Multimedia framework,
   - Play Audio and Video, Text to speech, Sensors, Async tasks
5.6 Audio Capture, Camera
5.7 Bluetooth, Animation 8
5.8 SQLite Database, necessity of SQLite. Creation and connection of the database,
     Extracting value from cursors, Transactions.

Unit VI: Security and Application Deployment

Topics:
6.1 SMS Telephony
6.2 Location Based Services:
       - Creating the project,
       - Getting the maps API key
       - Displaying the map
       - Displaying the zoom control
       - Navigating to a specific location
       - Adding markers
       - Getting location
       - Geocoding and reverse Geocoding
       - Getting Location data, Monitoring Location.
6.3 Android Security Model, Declaring and Using Permissions, Using Custom Permission.
6.4 Application Deployment:
   - CreatingSmall Application, Signing of application
   - Deploying app on Google Play Store, Become a Publisher, Developer Console.