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18MC307 ADVANCED MOBILE APPLICATION DEVELOPMENT USING ANDROID

Course Description and Objectives:

This course enables the student to explore advanced user interface components, persistent data storage, messaging techniques, client/server applications and mobile app development process. In addition, the student develops his/her ability to create two/three or n-tier mobile applications.

Course Outcomes:

The student will be able to:

- Get familiarity in mobile user interface components.
- Use data storage procedures and retrieval process.
- Apply several mobile communication techniques.
- Create interoperable mobile apps using version control and deployment.

Skills:

- Design and development of mobile commerce applications.
- Implement temporary and persistent mobile apps like contacts, messaging, and messengers etc...
- Prepare apk or other mobile app deployment format files.

Activities:

- Create Image Gallery for online Shopping in Grid view.
- Create menus for any one standard mobile application.
- Design and develop contacts mobile application using SQLite Database.
- Implement an Android program for HTTP Connection
- Design and develop simple charting mobile app using socket programming
- Create the APK file for all the above mobile experiments and create signature certificates.

Syllabus

UNIT – 1

12 Hours

DISPLAYING PICTURES AND MENUS WITH VIEWS: Image views to display pictures - Gallery and Image views, Image Switcher, Grid View; Menu Views – Creating the helper methods, Option menu, Content Menu.

UNIT – 2

12 Hours

DATA PERSISTENCE:Creating and using data bases – Creating and DBAdapter helper class, Using Data base, Creating Database.

UNIT – 3

12 Hours

MESSAGING: SMS Messaging – Sending SMS Messages, Sending SMS using Intent, Receiving SMS messages, Sending E-mail.

UNIT – 4

12 Hours

NETWORKING: Consuming web services using HTTP, Consuming JSON Services, and Socket Programming.

UNIT – 5

12 Hours

PUBLISHING ANDROID APPLICATION:Preparing for publishing – Versioning your application, Digitally signing android applications; Deploying APK File using Deployment tools.

Test Book:

Wei-Meng Lee, “Beginning Android Application Development”, 1st Edition, John Wiley & Sons, Inc, 2012.

Reference Books:

- 1.RaimonRefolsMontane, Laurence Dawson, “Learning and Android Application Development”, 1st Edition, PACKT Publishing, 2016.
2. Reto Meier, “Professional Android 4 Application Development”, Wrox, 3rd Edition, 2012.
3. Adam Gerber and Clifton Craig, “Learn Android Studio”, 1st Edition, Apress, 2015.