RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

New Scheme Based On AICTE Flexible Curricula

Computer Science & Information Technology, VI-Semester

CSIT-606 Android Programming

Course Objective:

The course is designed with an objective to Install and configure Android application development tools. Design and develop user Interfaces for the Android platform, Save state information across important operating system events and apply Java programming concepts to Android application development.

Course Outcomes:

1. Experiment on Integrated Development Environment for Android Application Development.
2. Design and Implement User Interfaces and Layouts of Android App.
3. Use Intents for activity and broadcasting data in Android App.
4. Design and Implement Database Application and Content Providers.
5. Experiment with Camera and Location Based service and develop Android App with Security features.

Course Contents:
UNIT I:
A little Background about mobile technologies, Overview of Android, An Open Platform for Mobile development, Open Handset Alliance, What does Android run On – Android Internals, Why to use Android for mobile development.

UNIT II:
My First Android Application, How to setup Android Development Environment, Android development Framework - Android-SDK, Eclipse.

UNIT III:
Emulators – What is an Emulator / Android AVD, Creating & setting up custom Android emulator, Android Project Framework, My First Android Application.

UNIT IV:
Understanding Intent, Activity, Activity Lifecycle and Manifest, Creating Application and new Activities, Expressions and Flow control, Android Manifest, Simple UI -Layouts and Layout properties, Fundamental Android UI Design.

UNIT V:
Introducing Layouts, Creating new Layouts, Drawable Resources, Resolution and density independence (px,dip,dp,sip,sp), XML Introduction to GUI objects viz., Push Button Text / Labels, EditText, ToggleButton, WeightSum, Padding, Layout Weight.

Recommended Books:

1. Head First Android Development, 2nd edition, OREILLY.
2. Android App Development for Dummies, 3rd edition, Michael Burton, John Wiley sons
   Busy Coder's Guide to Android Development, Mark L. Murphy, Commonsware.

List of Experiments:

1. Setting up the development Environment.
2. Implement an android application that demonstrates the use of scroll view for text with HTML formatting.
3. Develop an application that uses GUI components, Font and Colors.
4. Develop an application that uses Layout Managers and event listeners.
5. Write an application that draws basic graphical primitives on the screen.
6. Develop an application that makes use of database.
7. Develop an application that makes use of RSS Feed.
8. Develop a native application that uses GPS location information.
9. Implement an application that creates an alert upon receiving a message.
10. Implement an application that implements Multi threading.
11. Implement an application that writes data to the SD card.