Prasad V. Potluri Siddhartha Institute of Technology:: Vijayawada.
Department of Computer Science and Engineering

I/II M.Tech. (CSE) - (Second Semester)

17CSCS2T1 MOBILE APPLICATION DEVELOPMENT Credits: 4

Lecture: 4 Periods/week **Internal Assessment: 40 Marks**
Semester end examination: 60 Marks

Course Description:

The course outlines the internals of the Android OS and Mobile Application programming features. It also covers the Mobile application development using the Android SDK.

Course Outcomes:

At the end of this course the graduate is able:

CO1: Understanding the basics of Android, Android Applications and its Anatomy.

CO2: To understand Android Frame Work and develop Android Applications using User Interface Design.

CO3: To implement content providers and fragments.

CO4: To demonstrate and implement Database Design for Android Applications.

UNIT - 1

Android Introduction and Basics:

Introduction to Android Platform, Android vs. other mobile platforms, Android Stack, Android Versions and Installing Android SDK components, updating SDK components,Android emulator, Sample programs on emulator. Java role and java for Android: Reshaping client side java as Android, java type system, scope and idioms of java programming.

UNIT - 2

Android Applications and its Anatomy:

Android programming model vs. traditional programming models, Activities, Intents and Tasks, Other Android Components, Component Life Cycles, Static Application Resources and Context Android Application Runtime Environment: Activity life cycle, Manifest File, Layout XML Code, Strings, The R File.

UNIT - 3

Android Frame Work and User Interface Design:

Android GUI Architecture, Assembling a Graphical Interface, different layouts – Linear Layout and Table Layout etc., Drawable Resources, Drawable Resources, Resolution and density independence Working with common widgets, List View and Adapters, The Menu and the Action Bar, View Debugging and Optimization.

Fragments : Creating a Fragment, Fragment Life Cycle, Fragment Manager, Fragment Transactions The Support Package, Fragments and Layout.

UNIT 4

Content Providers: Understanding Content Providers, Defining a Provider Public API, Writing and Integrating a Content Provider, File Management and Binary Data, Android MVC & Content observation. Sample Content Provider.

Handling and Persisting Data: Relational Database Overview, SQLite, SQL and the DatabaseCentric Data Model for Android Applications, the Android Database Classes, Database Design for Android Applications.

Text Book:

1. Programming Android, 2nd Edition(Oct-2012), by Zigurd Mednieks, Larid Dornin, G.Blake Meike, Masumi Nakamura , O‟reilly (SPD) Publications.

Reference:

1. Beginning Android 4 Application Development, by Wei-Meng Lee