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**CSX434 *Mobile and Web Applications***

**L-T-P-Cr: 3-0-0-3**

**Pre-requisites:** Nill.

**Objectives/Overview:**

* To learn android programming to develop applications for smartphones.
* Understanding the mobile application development life cycle and familiarization with android APIs for data storage.
* Learning the development of web applications based on client-server architecture using Java technologies.

**Course Outcomes:**

At the end of the course, a student should have:

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| **Sl. No.** | **Outcome** | **Mapping to POs** |
|  | Understandability of mobile application developments. | PO3, PO4 |
|  | Knowledge about the main components of android applications and their interactions. | PO3 |
|  | Learning storage and retrieval of data for mobile applications. | PO3 |
|  | Development of web applications using servlet and jsp. | PO3, PO6 |
|  | Knowledge to develop application for bigger applications using EJB. | PO3, PO6 |

**UNIT I Lectures 11**

Introduction to mobile applications, installing of Android Studio and the latest SDK Tools and preparing the working environment, creating your first Android Application,  
Layouts, Views, Resources, Activities, Activities Lifecycle, Intents, Background tasks, Fragments, Nested fragments, Preferences, User Interaction – input, menu items, custom views, User Experience – themes and styles, material design, adaptive layouts, accessibility, localization, debugging the UI.

**UNIT II Lectures 12**

Storing Data, SQLite database, Sharing Data, content resolvers and providers, loaders to load data, Services, background work, alarms, broadcast receivers, Notification, widgets, transferring data efficiently, publishing app, Multiple form factors.

**UNIT III Lectures 4**

HTML and HTTP, Servlet, Servlet doGet( )/doPost( ), Servlet life cycle, Servlet session.

**UNIT IV Lectures 8**

Understanding of JSP, JSP life cycle, JSP declarations, JSP Scriptlets, JSP expression, JSP directive, JSP implicit objects, JSP user defined tags.

**UNIT V Lectures 7**

EJB – Basics of EJB – Types of Beans – Development of Session Beans – Steps – Creating & Implementing Interfaces – Writing Deployment descriptors – Packaging and deploying bean – using the bean from a client – Development of stateful session bean. Entity beans – Features (Basics of developing and using entity beans)

**Text/Reference Books**

1. Android Programming (Big Nerd Ranch Guide), by Phillips, Stewart, Hardy and Marsicano
2. Head First Servlet and JSP by Bert Bates, Bryan Basham, Kathy Sierra, O’REILLY.
3. Mastering Enterprise Java Beans and Java 2 platforms by Ed Roman.
4. Android Programming – Pushing the limits by Hellman.