INSTITUTE OF BUSINESS & MANAGEMENT SCIENCES (IBMS)
THE UNIVERSITY OF AGRICULTURE PESHAWAR

Programme: BS (CS) – VIII
Course Name: Mobile Application and Development
Course Code: CSE-611
Course Hours: 03
Total Weeks: 16
Total Hours: 48

Course Objectives

The aim of this course is to teach the basic and Mobile application and development. Overview and specially getting expertise in mobile application and development. In this course students learn about mobile application and development fundamentals in a fast track manner, Introductin to Android, XML, Basic User Interface, Different Layouts, Event Handling, Views, Menu, Shared Preferences and development of database applications using Android and SQlite. This course also covers will prepare students for developing mobile application at beginner and intermediate level.

Week-1
    Lect#1
        Introduction
        - What is Android
        - Origin of Android
        - Android Features
        - Android Versions, Limitation
        - Anatomy of Android Application
    Lect#2
        - Installation
        - Explaining Environment
        - Creating a project
    Lect#3
        - XML in Android
        - Basic of user interface
        - View and ViewGroup
        - Lab Task: Create AVD

Week-2
    Lect#1
    - Working with Activity_Main Xml and MainActivity Java
    - Working with Resources folder
        Lect#2
        - Working with Value Folder
        - Working with color
        - Working with strings

Lect#3
- Working with Android Manifest.xml
- Lab Task: Testing Android studio app on physical device

Week-3
Lect#1

Android Linear Layout
- Types of Linear layout
- Main attributes in Linear Layout
- Gravity
- Layout Gravity
- Weight

Lec#2

- Relative Layout
- Attributes of Relative layout
- Relative Layout Examples With Code And Explanation

Lec#3

- Table Layout
- Stretch, Shrink Table Columns
- Lab Task: Create Layout using both Linear Layout, Relative Layout

Week-4

Lec#1

- Working with Button
- Attributes of Button in Android:
- Button Example In Android Studio

Lec#2
- Creation of a Button
- Assigning text to a Button
- Assigning id to a button
- Background, text color changing color
- Bringing Icons and drawable

Lec#3

- Handling Button Events
- onClick XML Attribut
- Java ActionListener
- Java Interfaces

Week-5

Lect#1

- Frame Layout
- Absolute Layout

Lec#2

Constraint Layout
- Advantages
- Use of constrain layout

Lect#3

- Layouts (Cont--)

Week-6

Lect#1

Android UI Control
- EditText
- Working with EditText (taking some input from users) type: email, number,text,password etc
- Creating Reference of button, EditText

Lect#2
- Password Field
- Working with Password Field
- ImageView

Lec#3

- CheckBox
- Radio Button

Week-7

Lect#1
- Toast
- Introduction to the Android LogCat
- btn click display message.

Lec#2
- Activity Life Cycle
- Activity life cycle with Example

Lect#3

- Working with TextView(label showing something to user)
  Show example text
- Creating a complete login screen
- Apply if else on username and password matching
  If match Then go to home screen else display message

Week-8

Lect#1 & 2
- Intent
- Explicit Intents
- Implicit Intents

Lect#3
- Splash Screen
- Creating more activity
- Working with Manifest File

Week-9

Working with More Views

Lec#1
- Image view
- List view

Lec#2
- Scroll View
- Android Rating bar

Lec#3
- Seek bar

Week-10

Introduction to Android Menus

Lec#1&2
- Option menu

Lec#3

- Popup menu

Week-11

Lec#1
- Working with Fragment

Lec#2&3

- Fragment Implementation with Examples

Week-12

Lec#1
- Android Shared Preferences

Lec#2
- Storing data using Shared Preferences

Lec#3

- Retrieving data using Shared Preferences

Week-13 & 14

Lec#1
- Working with SqLite Database

Lec#2

- Connectivity with Database

Lec#3

- Inserting,deleting ,retrieving,updating

Week15-16
Project
- Presentations/ Final Semester Project

References

1. Beginning Android Programming with Android Studio by J.F. DiMarzio
2. Head First Android Development A Brain Friendly Guide by Dawn Griffiths and David Griffiths
3. Android Programming for Beginners by John Horton
4. https://www.tutorialspoint.com
5. http://www.javapoint.com
6. http://www.abhiandroid.com
7. https://developer.android.com/guide

Lab Experiments	
Lab 1	• Installation of Android, JDK
Lab 2	• Explaining Environment • Create AVD • Using Your phone for Checking Output

Lab 3	Creating Linear and Relative layout
Lab 4	Creating Button, Text view
Lab 5	Splash Screen
Lab 6	Toast
Lab 7	Intent
Lab 8	Image View, List View
Lab 9	Menu
Lab 10	Fragments
Lab 11	Xamp installation and database creation
Lab 12	Connecting database
Lab 13	Insertion and delete operation on database