

Lecture Plan

Name of the college: Government College of Arts, Science and Commerce, Sanquelim- Goa

Name of Faculty: Mr. Amar R. Naik

Subject: Computer Science

Paper code: CSC – 241 Mobile App Development

Program: S.Y.B.Sc.

Division: -

Academic year: 2024 - 2025

Semester: III

Total Lectures: 15 (T) & 60 (P)

Course Objectives:

1. Introduce Mobile Application Development for the Android Platform using XML and Java/ Kotlin.
2. Understand the different components for building the Android App.
3. Develop applications that will run on Android phones and tablets.

Course Learning Outcome:

On completion of the course students will be able to :

- Describe the anatomy of a mobile app and use Android components in designing simple mobile applications.
- Identify the significance of each of the Android basic building blocks and determine when to use which component.
- Discuss the data storage options available on android platform and perform basic CRUD operations on persistent data.
- Design complete Android app by integrating the android building blocks and using firebase as backend tool.

Student Learning Outcome:

On completion of the course students will be able to :

- Describe the anatomy of a mobile app and use Android components in designing simple mobile applications.
- Identify the significance of each of the Android basic building blocks and determine when to use which component.
- Discuss the data storage options available on android platform and perform basic CRUD operations on persistent data.
- Design complete Android app by integrating the android building blocks and using firebase as backend tool.

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
June	28/06/2024	29/06/2024	1	Syllabus overview, Marks Distribution, Introduction, Need for Mobile Apps		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide, Shroff/O'Reilly; Second edition, 2017
July	01/07/2024	06/07/24	1	Different types of Mobile Apps, Overview of Android Architecture		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide, Shroff/O'Reilly; Second edition, 2017
July	08/07/2024	13/07/24	1	Android Basic Building blocks: Activities, Services, Broadcast Receivers and Content Providers		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
July	15/07/2024	20/07/24	1	UI Components: Views, layouts (LinearLayout and RelativeLayout and WebView)	Assignment on Building blocks/ Components/ Architecture	Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
July	22/07/2024	27/07/24	1	Responsive UI with ConstraintLayout, Significance of application Manifest file		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
July/ August	29/07/2024	03/08/24	1	User Interface (UI): Common UI components, event handling, Activity lifecycle		Laptop, LCD Projector, PPT	John Horton, Android Programming for Beginners, Packt Publishing Limited , 2015
August	05/08/2024	10/08/24	1	Building Layouts with an Adapter (GridView & ListView)	Exercise on designing simple interface	Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
August	12/08/2024	17/08/24	1	Custom Adapters, Menus (Options menu & Context menu), Toast		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
August	19/08/2024	24/08/24	1	Intents: uses, types (Implicit & Explicit)		Laptop, LCD Projector, PPT	Erik Hellman, Android Programming: Pushing the Limits (MISL-WILEY) , Wiley,2013
August	26/08/2024	31/08/24	1	Broadcast Receivers: Broadcast receiver registration (Static & Dynamic)		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
September	02/09/2024	07/09/24	-	-	-	-	-

September	09/09/2024	14/09/24	1	Broadcast Receiver Classes		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
September	16/09/2024	21/09/24	1	Services: Overview of services in Android, Implementing a Service.		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
September	23/09/2024	28/09/24	1	Services lifecycle, Data Storage: Shared Preference		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
September/ October	30/09/2024	05/10/24	1	Android File System, SQLite		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
October	07/10/2024	12/10/24	1	SQLite		Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
October	14/10/2024	19/10/24	1	SQLite, Revision	SQLite implemetation	Laptop, LCD Projector, PPT	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
October	21/10/2024	22/10/2024	1	Revision		Laptop, LCD Projector	
PRACTICAL							
June	28/06/2024	29/06/2024	-	-	-	-	-
July	01/07/2024	06/07/24	2	Explore Android Studio, Setup device emulator, Demonstrating use of different layouts, use of basic views.		Laptop, Android Studio, projector	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
July	08/07/2024	13/07/24	2	Event handling with the help of Calculator App	Calculator app assignment	Laptop, Android Studio, projector	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
July	15/07/2024	20/07/24	2	ListView layout design, Load listview with data, Add/ remove items		Laptop, Android Studio, projector	https://developer.android.com/ Web references
July	22/07/2024	27/07/24	2	Intents: Implicit - display a webpage, send a message		Laptop, Android Studio, projector	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
July/ August	29/07/2024	03/08/24	2	Explicit intent - launch an activity, pass data between activities		Laptop, Android Studio, projector	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
August	05/08/2024	10/08/24	2	Restaurant App	Restaurant app	Laptop, Android Studio, projector	https://developer.android.com/ Web references
August	12/08/2024	17/08/24	-	-	-	-	-
August	19/08/2024	24/08/24	2	Alert Dialog demonstration		Laptop, Android	https://developer.android.com/

						Studio, projector	Web references
August	26/08/2024	31/08/24	2	Broadcast receiver implementation	Zoo app	Laptop, Android Studio, projector	https://developer.android.com/
September	02/09/2024	07/09/24	2	Web services		Laptop, Android Studio, projector	https://developer.android.com/ Web references
September	09/09/2024	14/09/24	-	-	-	-	-
September	16/09/2024	21/09/24	2	SQLite content values		Laptop, Android Studio, projector	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
September	23/09/2024	28/09/24	2	SqLite queries		Laptop, Android Studio, projector	Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide
September/ October	30/09/2024	05/10/24	2	Contact list app using SQLite		Laptop, Android Studio, projector	https://developer.android.com/ Web references
October	07/10/2024	12/10/24	2	Firebase posting, retrieving data		Laptop, Android Studio, projector	https://developer.android.com/ Web references
October	14/10/2024	19/10/24	2	Small mini project using firebase		Laptop, Android Studio, projector	
October	21/10/2024	22/10/2024	-	-	-	-	-

***Assessment Rubrics**

Component	Max Marks
Theory	
ISA 1	05
ISA 2	05
Best 1 ISA	
SEA	20
Practical	
ISA 1	05
ISA 2	05
ISA 3	05
Best 2 ISA	
SEA	40