

Savitribai Phule Pune University, Pune

Faculty of Commerce and Management

Master of Computer Applications (MCA)

Programme Curriculum (Sem. III & IV)
(2020-2022)

Semester III

Course Code: IT-31

Course Name: Mobile Application Development

Credit Scheme			Evaluation Scheme				
Lecture	Practical	Credit	Internal			External	Total
			Written	Practical	Tutorial		
3 Hrs./Week	-	3	25	-	-	50	75

Course Description:

Course Objectives:

1. To understand the different mobile application Architectures.
2. To understand different types of widgets like buttons, views, layout etc.
3. To know the ways of application handling like intents, adapters, Notifications, Web Services and Web View.
4. To learn and know about data storing, retrieval and sharing in android.
5. To explore cross platform mobile application development framework, React Native and Flutter.

Course Outcomes:

Student will be able to

- CO1: Understand Various Mobile Application Architectures. (Understand)
- CO2: Apply different types of widgets and Layouts. (Apply)
- CO3: Describe Web Services and Web Views in mobile applications. (Understand)
- CO4: Implement data storing and retrieval methods in android. (Apply)
- CO5: Demonstrate Hybrid Mobile App Framework. (Apply)

Course Structure:

Unit No.	Topics Details	Weightage in %	No of Sessions
1	1. Mobile application development architectures 1.1. Introduction to Mobile Application technologies 1.2. Android Architecture 1.3. IOS Architecture 1.4. Windows Architecture 1.5. Hybrid Architecture	14	5
2	2. Creating Android Application 2.1. Creating Android project 2.2. Project Structure 2.3. Activity and Activity Life Cycle 2.4. Fragment and Fragment Life Cycle 2.5 Views and View groups	20	10
3	3. Interactivity Tools 3.1. Intents and Filters 3.2. Adapters 3.3. Dialogs 3.4. Menus 3.5. Notifications	20	10
4	4. Interaction with Database 4.1. Introduction to Database (SQLite and Firebase) 4.2. Cursors and content values 4.3. CRUD Operations	16	6
5	5. Web Services and Web View 5.1. Introduction to web services 5.2. Receiving HTTP Response (JSON, XML) 5.3. Parsing JSON and XML 5.4. Introduction to Web View	12	5
6	6. React Native 6.1. Introduction 6.2. Environment Setup 6.3. JavaScript ES6 Overview 6.4. Create React Native App 6.5. React Native Alert API 6.6. React Native Geolocation API 6.7. Third Party Libraries	10	5
7	7. Introduction Flutter 7.1. Overview of Flutter 7.2. Installation of Flutter 7.3. Architecture of Flutter 7.4. Introduction to Dart Programming 7.5. Demonstration of Simple application	8	4
Total:		100	45

Course References:

Reference Books:

1. Professional Android 4 Application Development by Meier, Reto - Wiley Education
2. Beginning Android 4 Application Development by Lee, Wei- Meng - Wiley Education
3. Android application Development: in 24 hours by Delessio, Carmen; Darcey, Lauren; Conder, Shane - Pearson Education
4. Android by Dixit, Prasanna Kumar - Vikas Publishing House
5. Android Studio Development Essentials Book by Neil Smith
6. Beginning App Development with Flutter by Rap Payne
7. Flutter in Action by Eric Windmill
8. REACT NATIVE IN ACTION DEVELOPING IOS AND ANDROID APPS WITH JAVASCRIPT BOOK BY NADER DABIT

Web Reference:

1. <https://developer.android.com>
2. <https://facebook.github.io/react-native/docs/tutorial>
3. <https://flutter.dev/docs/get-started/install>