

GANPAT UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY	
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Programme		Bachelor of Technology				Branch/Spec.	Computer Engineering / Information Technology		
Semester		V				Version	2.0.0.0		
Effective from Academic Year			2020-21			Effective for the batch Admitted in		July 2018	
Subject code		2CEIT5PE5		Subject Name		Mobile Application Development			
Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CE	SEE	Total
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Credit	2	0	2	-	4	Theory	40	60	100
Hours	2	0	4	-	6	Practical	30	20	50

Pre-requisites:

Object oriented programming

Objectives of the course:

1. Understand the basics of Android devices and Platform.
2. Acquire knowledge on basic building blocks of Android programming required for Application development.
3. Gain knowledge to user interfaces used in android applications.
4. Acquire knowledge on advanced application concepts like networking, Animations and Google Maps services etc.
5. Develop and publish Android applications in to Android Market.
6. Understand the knowledge of JSON and applications of JSON.

Theory syllabus

Unit	Content	Hrs
1	Introduction to Android: History of Mobile Software Development, Open Handset Alliance, What is an Android, Difference between i-phone OS (apple) and Android OS, Define term HTML, XML and WML	02
2	Setting Up Your Android Development Environment: Configuring Your Development Environment, Difference between JVM and DVM, Android platform Architecture, Advantage of DVM over JVM, Android Emulator	02
3	Understanding the Anatomy of an Android Application: What is the meaning of an Anatomy? , Explain the activity with their states? , What are the methods used in android activity life cycle? , Explain the Android activity life cycle	03
4	Defining your Application using the Android Manifest file: Core files and Directories of the Android Application, What are the contents of the Android Manifest file? , How to edit the Android manifest file?, Registering Activities and Other in Application	02
5	Managing Application Resources: What Are Resources?, Storing Application Resources , Understanding the, Resource Directory Hierarchy, Resource Value Types, Setting Simple Resource Values Using Eclipse, Working with String, String Arrays, Boolean, Integer, Colours, Dimensions, Drawables, Images resources etc..., Working with Layouts, Using Layout Resources Programmatically	03
6	Exploring User Interface Screen Elements: Introducing the Android View, Android Control, Android Layout, Displaying Text to Users with Text View, Configuring Layout and Sizing, Using Buttons, Check Boxes, Radio Groups,	03

	spinner, Progress Bar	
7	Designing User Interfaces with Layouts: Creating User Interfaces in Android, Creating Layouts Using XML Resources and Programmatically, ScrollView, GridView, ListView, Spinner	02
8	Drawing and Working with Animation: Design Working with Canvases and Paints, Drawing Ovals and Circles, Frame by frame & tween animation	03
9	Explore Data Storage Techniques: Working with Shared Preferences, What is SQLite, features of SQLite, store data in SQLite	03
10	Explore Google Map: Feature of Google map, version of Google map APIs, integration of google map in android application	02
11	Working with other components: Use of TimePicker & DatePicker, Different Dialogboxes, Option menu & context menu, Send/read SMS, JSON & Application with JSON	03
12	iPhone OS: Introduction to iPhone Architecture, AppDelegate, View controller, Interface Builder, Nib File, COCOA and MVC Framework, Overview of features of latest iOS	02
Practical content		
Experiments/Practicals/Simulations would be carried out based on syllabus.		
Text Books		
1	The Swift Programming Language By Apple Inc.	
2.	Android Programming with Kotlin for Beginners by John Horton, Packt Publishing Limited.	
Reference Books		
1	Android Wireless Application Development, by Shane Conder & Lauren Darcey. Pearson.	
2	Head First Kotlin: A Brain - Friendly Guide by Dawn Griffiths and David Griffiths.	
3	Head First Android Development: A Brain-Friendly Guide By Dawn Griffiths and David Griffiths.	
4	Kotline in Action By Dmitry Jemerov, Svetlana Isakova.	
5	Programming Kotlin By Stephen Samuel, Stefan Bocutiu.	
6	iOS 11 Swift Programming Cookbook By Vandad Nahavadiipoor.	
ICT/MOOCs Reference		
1	https://www.mooc-list.com/tags/android-developmen	
2	https://www.mooc-list.com/tags/ios-development	
3	https://www.udacity.com/course/kotlin-for-android-developers--ud888	
4	https://www.udemy.com/course/learn-kotlin-by-making-android-app/	
5	https://developer.android.com/guide	
6	https://developer.apple.com/documentation/	
Course Outcomes:		
After successful completion of this course, student will be able to		
1. Analyse business trends impacting Android Platform.		
2. Be competent with the characterization and architecture of mobile applications.		
3. Understand enterprise scale requirements of mobile applications.		
4. Design and develop mobile applications using application development framework.		
5. Understand how to handle and share android data.		
6. Develop an android services and to publish android application for use.		