



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL
(A constituent unit of MAHE, Manipal)

COURSE PLAN

Department	:	Data Science & Computer Applications			
Course Name & code	:	MOBILE APPLICATIONS DEVELOPMENT & MCA 5162			
Semester & branch	:	III & MCA			
Name of the faculty	:	SSS Shameem, Shrinidhi B, Janani			
No of contact hours/week:		L	T	P	C
		Lecture(L)	1	3	2

Course Outcomes (COs)

At the end of this course, the student should be able to:

		No. of Contact Hours	Marks
CO1:	Understands the basic technologies used by the Android platform. Recognizes the structure of an Android application project and Use the necessary tools for Android application project.	09	25
CO2:	Design and develop user Interfaces for the Android platform.	07	20
CO3:	Apply Java programming concepts to Android application development.	08	25
CO4:	Demonstrate the ability to handle the client server management using Android application and running through mobile devices.	12	30
CO5:	Click or tap here to enter text.	Hrs.	Marks
	Total	36	100

Assessment Plan

1. Continuous Evaluation	20% <ul style="list-style-type: none">✓ Total 20 marks✓ 4 marks - write-up of the experiments,✓ 7.5 marks - experiment execution check,✓ 7.5 marks - Quiz
2. Mid Term Evaluation	20% <ul style="list-style-type: none">✓ Total 20 marks✓ 5 marks - write-up of experiment & execution check✓ 15 marks - Test
3. Mini Project Evaluation	20% <ul style="list-style-type: none">✓ Total 20 marks
4. Lab Examination	40% <ul style="list-style-type: none">✓ Total 40 marks✓ Examination of 3 hours duration

Lesson Plan

Lab No.	Topics	Course Outcome Addressed
L1	<ol style="list-style-type: none">1. Create a Hello world android application using android studio and compile it using android SDK. Run it on both Android Virtual Device (AVD) and your own mobile.2. Create an android application to display the welcome message as a toast.<ol style="list-style-type: none">a) Default toast displayb) Toast on button click3. Create an android application and understand the application life-cycle in different scenarios.	CO1
L2	<ol style="list-style-type: none">4. Create an android application to input two numbers and display the sum on button click.<ol style="list-style-type: none">a) Display result in toast & textview.b) Validate the sum action.c) Provide Reset button with its functionality.d) Customize the app name, and icon.e) Customize the UI component with color, font properties.f) Make use of String & Color resource files.g) Apply different layouts for this; Relative, Constraint and Linear.	CO1, CO2

L3	<p>5. Create an android application that accepts basic user info and displays the same.</p> <ol style="list-style-type: none"> Make use of TextView, EditView, Button, RadioButton, CheckBox, Image, nested layouts etc. Display suitable toast for any radiobutton/checkbox selection. <p>6. Create simple application of calculator (GUI).</p>	CO1, CO2
L4	<p>7. For the Project in L3/T5; add the following features;</p> <ol style="list-style-type: none"> Display the info in DIFFERENT page/activity. Enable 'back' button to return to Home page. Use toggle button to 'Reset' input area. <p>8. Create a Master App by integrating ALL previous programs into one single App. Provide suitable options to navigate between activities.</p>	CO2, CO3
L5	<p>9. Create an android application to display a list of bank names in a spinner and when you select the particular bank name, the logo and IFSC-code of the selected bank should be displayed using custom toast.</p> <p>10. Create an android application to depict the option menu with following features:</p> <ol style="list-style-type: none"> Toast menu option to display a Toast message. Exit menu to close the App. President menu should open a new activity with two fragments. First fragment should contain a listview of all presidents of Independent India. When you select any president's name, corresponding details should be visible in the second fragment. Details should include: <i>Name, Presidential period, Qualification, Professional experience, Lifetime, Special Achievements, & Image, etc.</i> 	CO2, CO3
L6	<p>11. For the Project in L5/T10; add the following features:</p> <ol style="list-style-type: none"> Gallery menu should open an image gallery of all presidents' using gridview. Display the selected grid image in full screen mode. <p>12. Create android applications to demonstrate the use of following;</p> <ol style="list-style-type: none"> Date picker and Time picker. Floating Action Button. Progress bar. 	CO2, CO3

L7	<p>13. Create an android application to implement the following:</p> <ol style="list-style-type: none"> Create a registration page of fields Username, password, email and phone number. Create a database with name "myDb" and table with name "register". Store the data from registration form into the "register" table. Display the registered details using the list view. Enable search feature to display the result for specific student id. Enable the user to edit or remove the details. 	CO3, CO4
L8	<p>14. Create an android application with THREE activities. First activity should have two buttons such as Log in and Registration.</p> <ol style="list-style-type: none"> By clicking "Log in" button, it should bring user to the Log in screen. By clicking "Registration", it should bring user to registration page. Create a registration page of fields Username, password, email, phone number, course, gender, age, etc. Apply necessary Validations to it: <ul style="list-style-type: none"> Make all the fields as mandatory Password must contain minimum of 6 characters, upper, lower, number. Phone should accept only 10 numbers Email should follow the standard format '@xyz.COM/EDU/IN/ORG' Use shared preferences that stores user name & password; and retrieve for login. 	CO3, CO4
L9	15. Create android applications to demonstrate the use of following Notification, Alert message, Scrolling, Cardview, Style & Theme.	CO2, CO3
L10	Mini Project	CO1-CO4
L11	Mini Project Evaluation	CO1-CO4
L12	End Sem Evaluation	

Tutorial Plan

Tutorial No.	Topics
T1	Introduction to Android, Architecture, Toast, Life-cycle.
T2	Android Components, Layout, Mini Project details.
T3	Android Components: TextView, EditView, Image, RadioButton, CheckBox.
T4	Intent, UI Components: Toggle Button, Multiple Activity.
T5	UI Components: Spinner, Custom Toast, Menu, Sub-Menu, Listview.
T6	Fragment, Gallery, Date picker, Time picker, Floating Action Button, Progress bar.
T7	Database.
T8	Data validation, Shared preference.
T9	Notification, Alert message, Scrolling, Card, Theme.
T10	Mini Project Doubt session
T11	Mini Project Evaluation
T12	Revision & Doubt session

References:

1. Android Community Experts, Android Cookbook, O'Reilly Media, Inc., First Edition, 2011
2. J. Paul Cardle, Android App Development in Android Studio, Manchester Academic Publishers
3. Dawn Griffiths & David Griffiths, Head First Android Development - A Brain-Friendly Guide, O'Reilly Media, Inc., Second Edition, 2017

Submitted by: Mr.SSS Shameem

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