M.Sc.(CA) 3rd Semester
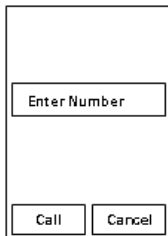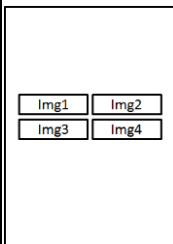### Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 1	Enrollment No:		Group : A
Practical Problem	a. Create an Android application having following layout. Enter Number Call Cancel **b. Create an Android application having following layout.** Img1 Img2 Img3 Img4 Test the application on different size of emulator i.e. HVGA, QVGA, WVGA800, WXGA etc. Hint: for drawable find/create different size image for ldpi, mdpi, hdpi, xhdpi folder, size should be as follow: mdpi = baseline (Suppose 48 x 48) ldpi= 0.75 * mdpi,hdpi = 1.5 * mdpi, xhdpi = 2 * mdpi		
Objective(s)	Student shall understand layout design in Android.		
Pre-requisite	Type of layout, Activity, and Intent		
Duration for completion	3 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	*CO2: Use application designing elements namely View, View Group, Adapter View.*		
Solution must contain	Layout file, Activity file, and AndroidManifest.xml		
Nature of submission	Handwritten		
References for solving the problem	Wei-Meng Lee, Beginning Android 4 Application Development, Wiley India Pvt Ltd. Page No: 117-123		
Sample Testing data	1.1 Skin Size - QVGA, HVGA, WVGA. Output – change accordingly size. 1.2 Orientation: landscape/ portrait. Output-change accordingly orientation.		
Post Laboratory questions	1. *If you do not put drawable in drawalbe-hdpi folder, so can you view drawable in hdpi skin? How?* 2. *Design given screen using LinearLayout.* 3. *What will happen, if you don't specify layout height?*		
Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	10		5
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Date		

M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 2	Enrollment No:		Group : A
Practical Problem	Using **Practical No: 1 layout**, if user clicks on **Call button**, make the call on entered number using appropriate intent, and on click of **Cancel button**, close the application.		
Objective(s)	To understand the use of implicit intent and explicit intent.		
Pre-requisite	Type of layouts, Activity, and Implicit Intent		
Duration for completion	1 Hour		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	*CO2: Use application designing elements namely View, View Group, Adapter View.*		
Solution must contain	Layout file, Activity file		
Nature of submission	Handwritten		
References for solving the problem	Wei-Meng Lee, Beginning Android 4 Application Development, Wiley India Pvt Ltd. Page No: 85-97		
Sample Testing data and outcome	Input-Any String, output-Enter proper number Input-Phone number, output- Dialer application shall open		
Post Laboratory questions	1. *What are the difference between implicit intent and explicit intent?* 2. *What happen, if you passed any string Instead of phone number to call dial application?* 3. *List applications which you can call using inbuilt/implicit intents.* 4. *If you do not parse the phone number then what will happen?*		
Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	**10**		**5**
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M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 3	Enrollment No:		Group : A

Practical Problem	Create a data entry form for Android device which will accept laptop detail such as Company name, model name, purchase date, price, backup time, and features. Application has "Next" button also, on click the next button system will display all entered value to the next activity. Hint: for name, address use edit text
	    For Company name use single-choice list dialog (Values will be HP, Compaq, and Acer etc.)
	    For purchase date use date picker dialog
	    For price and model name use EditText
	    For back up time use time picker dialog
	    For features use multichoice list dialog (Values may be Graphics card, Bluetooth, wi-fi)		

Objective(s)	To understand the concept of layout design		
Pre-requisite	Knowledge of designing elements, and Activity.		
Duration for completion	3 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	*CO2: Use application designing elements namely View, View Group, Adapter View.* *CO3: design GUI for the mobile application.*		
Solution must contain	Layout file, Activity file		
Nature of submission	Handwritten		
References for solving the problem	Wei-Meng Lee, Beginning Android 4 Application Development, Wiley India Pvt Ltd. Page No: 42-53, 179-191, 219-230,243-249		
Sample Testing data and outcome	STD 1(Entry) 1.1 : input-Blank entry, output-"All details are mandatory" 1.2: input- all detail, output- display data to next activity.		
Post Laboratory questions	1. *What is Activity stack?* 2. *Whether the given code would be successfully execute or not? If it raises any run-time exception than write an exception name or correct the code.* *TextView tv;* *tv.setText("Hello World");* 3. *Which method is used to create a multi-choice dialog?* 4. *Which class is the base class for DatePickerDialog?*		
Assessment		

	Solution achieves the desired objective(s)	Viva
Out of Marks	10	5
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Date		

M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 4	Enrollment No:		Group : A
Practical Problem	Write an Android application, which will create an illusion of walking man. Create/download 4-5 images for frames by your self.		
Objective(s)	Use of animation		
Pre-requisite	Basic of android animation		
Duration for completion	3 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	*CO2: Use application designing elements namely View, View Group, Adapter View.* *CO3: design GUI for the mobile application.*		
Solution must contain	Layout file, Activity file, anim resource file		
Nature of submission	Handwritten		
References for solving the problem	Reto Meier, Professional Android 2 Application Development, Wiley India Pvt Ltd. Page No: 64-66		
Sample Testing data and outcome	1.1 Skin Size - QVGA, HVGA, WVGA. Output – change accordingly size. 1.2 Orientation: landscape/ portrait. Output-change accordingly orientation.		
Post Laboratory questions	1. *Define Animation.* 2. *List all types of tween animation.* 3. *What is the use of* fillAfter *property?* 4. *Which class is use to create frame by frame animation?*		
Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	10		5
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M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 5	Enrollment No:		Group : A
Practical Problem	Extend **Practical 3,** which provides the facility to save laptop details, and view list of the data. On long press of particular list item, user can edit or delete the selected item.		
Objective(s)	Use of SQLite, and menu.		
Pre-requisite	Activity and SQLite		
Duration for completion	3 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	CO4: develop mobile applications using APIs namely data storage, Location Based, Web Services, and Telephony Manager. CO3: design GUI for the mobile application.		
Solution must contain	Layout file, Activity file, database helper file		
Nature of submission	Handwritten		
References for solving the problem	Wei-Meng Lee, Beginning Android 4 Application Development, Wiley India Pvt Ltd. Page No: 273-290		
Sample Testing data and outcome (STD)	STD 1(Entry) 1.1 : input-Blank entry, output-"All details are mandatory" 1.2 : input- all detail, output- insert data to database, message="Successfully inserted" STD 2 (Search) 2.1: input-any string apart from date, output-Message="Invalid input" 2.3: input-30-4-2014, output-Display searched result to ListView STD 3(Delete) 3.1: Input-Select Record, output- delete record from database, message="Record deleted successfully",refresh ListView.		
Post Laboratory questions	1. *Which of two methods must be overridden while inheriting* SQLiteOpenHelper *class?* 2. *When* onUpgrade() *method is called?* 3. *In Android two applications can share same database. –Justify.* 4. *Write data type of date in SQLite.*		
Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	**10**		**5**
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M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 6	Enrollment No:		Group : A
Practical Problem	Create an Android application which read contact name from Contacts application, and display contact name to *ListView*. On long press of any of the list item a context menu shall be display having an option called "Send SMS". On click of "Send SMS" option, an inbuilt messaging application should be open with an appropriate data. (I.e. pass the phone number of selected contact to messaging application)		
Objective(s)	Use of ContentProvider		
Pre-requisite	Activity, layout and ContentProivder		
Duration for completion	2 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	*CO4: develop mobile applications using APIs namely data storage, Location Based, Web Services, and Telephony Manager.*		
Solution must contain	Layout file, Activity file, and AndroidManifest.xml		
Nature of submission	Handwritten		
References for solving the problem	Wei-Meng Lee, Beginning Android 4 Application Development, Wiley India Pvt Ltd. Page No: 293-319		
Sample Testing data and outcome	-Application should able to read more than one contact number form contact book.		
Post Laboratory questions	1. *What are the advantages of ContentProvider?* 2. *List out Android inbuilt ContentProviders.* 3. *For reading contact, If you forgot to set the permission then which error shall generated?* 4. *Define URI in the context of ContentProvider.*		
Assessment			
	Solution achieves the desired objective(s)		Viva
Out of Marks	10		5
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M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 7	Enrollment No:		Group : A
Practical Problem	Create sample application with login module. (Get and set username and password using SharedPreferences), on successful login, go to Practical 5.		
Objective(s)	Use of SharedPreferences		
Pre-requisite	SharedPreferences, Activity, and layout		
Duration for completion	2 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	*CO4: develop mobile applications using APIs namely data storage, Location Based, Web Services, and Telephony Manager.*		
Solution must contain	Layout file, Activity file		
Nature of submission	Handwritten		
References for solving the problem	Wei-Meng Lee, Beginning Android 4 Application Development, Wiley India Pvt Ltd. Page No: 251-263		
Sample Testing data and outcome	-Blank detail should not be saved to SharedPreferences.		
Post Laboratory questions	1. *What is use of getSharedPreferences() method?* 2. *List any two differences between getSharedPreferences() and getPreferences().* 3. *What will happen, If after editing I do not commit the .xml file?* 4. *Is it possible to copy shared preferences data to SQLite? How?*		

Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	**10**		**5**
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M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 8	Enrollment No:		Group : A
Practical Problem	Create an application to read text file from asset folder and copy it in sdcard		
Objective(s)	Use of file management, and, sd card management.		
Pre-requisite	Android permission, Actiivty, and layout		
Duration for completion	4 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	CO4: develop mobile applications using APIs namely data storage, Location Based, Web Services, and Telephony Manager.		
Solution must contain	Layout file, Activity file, and AndroidManifest.xml		
Nature of submission	Handwritten		
References for solving the problem	Wei-Meng Lee, Beginning Android 4 Application Development, Wiley India Pvt Ltd. Page No: 263-273		
Sample Testing data and outcome	-File size having more than 1GB should also be read by an Application.		
Post Laboratory questions	1. *Which permission needs to be set to write an external storage?* 2. *If you forgot to set a permission to write an external storage which error shall be generated?* 3. *What is difference between assets and res/raw folder?* 4. *If file size is more than 1GB, then how to read file from assess folder?*		
Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	10		5
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M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 9	Enrollment No:		Group : A
Practical Problem	Develop an Android application which asks for a password when user reboots his mobile device. (Note: user can not close the activity, so disable back and home button. Test the application on Android 2.2)		
Objective(s)	Use of Broadcast Actions		
Pre-requisite	Android Broadcast service		
Duration for completion	4 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	CO4: develop mobile applications using APIs namely data storage, Location Based, Web Services, and Telephony Manager.		
Solution must contain	Layout file, Receiver file, and AndroidManifest.xml		
Nature of submission	Handwritten		
References for solving the problem	http://developer.android.com/reference/android/content/Intent.html		
Sample Testing data and outcome	Application should run on any target device.		
Post Laboratory questions	1. *Which components of an Android application works as background application?* 2. *List any two standard action of broadcast.* 3. *Which method need to be override while inherits BroadcastReceiver class?* 4. *If you forgot to register receiver class in AndroidManifest.xml file, what will happen?*		
Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	10		5
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Date			

M.Sc.(CA) 3rd Semester
Practical Problem and Assessment Policy
040020301: Mobile Application Development

Practical No : 10	Enrollment No:		Group : A
Practical Problem	Develop an Android application which having an activity, activity having a button called "Start SMS Service". On click of a button a service would start which sends "Good Night" message to "5556" number at every night 10PM.		
Objective(s)	To understand the use of Service.		
Pre-requisite	Android Service		
Duration for completion	4 Hours		
PEO(s) to be achieved	*PEO2: To provide quality practical skill of tools and technologies to solve industry problems.*		
PO(s) to be achieved	*PO6: Ability to use the techniques, skills and modern tools as necessary for software development*		
CO(s) to be achieved	*CO4: develop mobile applications using APIs namely data storage, Location Based, Web Services, and Telephony Manager.*		
Solution must contain	Layout file, Service file, Activity, and AndroidManifest.xml		
Nature of submission	Handwritten		
References for solving the problem	Reto Meier, Professional Android 2 Application Development, Wiley India Pvt Ltd. Page No: 320-325		
Sample Testing data and outcome	Check application after reset time.		
Post Laboratory questions	1. *Differentiate Intent and PendingIntent.* 2. *Which permission needs to be set to send SMS.* 3. *Which method must to be override while inheriting Service class.* 4. *If you forgot to register service class in AndroidManifest.xml file, what will happen?*		
Assessment			
	Solution achieves the desired objective(s)		**Viva**
Out of Marks	10		5
Secured by the student			
Signature			
Date			