

Excesice 1

Run first Program in Android Studio and understand the process
Write Program with empty Activity, add drawables and understand Gradle system and resources ."
Write Program with various callback method of activity and understand it with different situation."
Write a program with two activity and use intent to navigate through Activity and open browser to load URL using intent ."
Creating Project Structure for Supporting Multiple Device Screen
Creating Project Structure for Supporting Landscape and or Portrait Support
Creating Project Structure for Supporting Multiple Locale Support
List User Permission and its Requirement
Activity Launch mode
Manifest Component and Meta-data
Intent Filter in Manifest
Category of Intent Filter
Which issue occur when Activity not Registered in Manifest
Which issue occur when Service not Registered in Manifest
Which issue occur when Broadcast not Registered in Manifest
Which issue occur when Provider not Registered in Manifest
List uses library in Manifest
Drawable Folder and Required Screen Resolution
Drawable folder for SVG image
Different between Round Icon and simple icon
user of Support RTL attribute
use featured required attributes
use Allow backup attribute
How to create Adaptive icon
Use of Config Changes
Use of theme
Use of Soft Input Mode
Use of App Level Gradle Build
Use of Project Level Gradle Build
Use of setting.Gradle
Extra Properties In Gradler
Use of Proguard
Implementation of Proguard
Interpretation of Mapping file in Proguard
Build/Product Flavours
What is ResConfig in Gradle
Vector Drawable Support in Gradle
API Level Theming
String file for Multiple Locale
Layout file folder structure for landscape and portrait

Excesice 2

Folder for app color
Folder for Animation file
Folder for Font file
Use of Asset Folder
Use of raw folder in value
Selcter File in Drawable
Diffrence between Drawable and Mipmap
Create Notification Icon and App Icon
Importing SVG File to Drawable
Use of Resource Manager in Android Studio
Folder For Creating Java Class File
Use Of Generated Java and Resource file
Folder Structure for NDK Support
Which Changes Required to Add NDK Support
Adding File and Project as library in Project

Excesice 3

Create example of Activity that print every method name when call that particular activity with splash screen.

Create simple Example of Splash Activity which visible for 3secound and navigate to other default screen.

Create simple Example of print 'hello world' into text view with using Activity Component with splash screen.

Create example of Activity that contain button and show toast message 'hello world' on tap button.

Create example of Activity that contain button and show snack bar with 'hello world' message on tap button.

Create example of Activity that show icon and text into same text view.

Create example of Activity that show text with multiple text color into same text view.

Create example of Activity that show text view with part of sting can be clickable into same text view and show that clickable text into Toast.

Create example of Activity that show attach image from camera and button for that open camera to capture image.

Create example of Activity that show attach image from camera and button for open camera to capture image.

Create example of Activity that show attach image from gallery and button for open gallery to choose image.

Create example of two Activity, that one have text input field for enter text and button for navigate to other Activity and print that entered message.

Create example of Activity that one have email and mobile number input field and submit button, fire validation on tap button if not valid and print information on valid and clear data if valid.

Create example of Activity that have two number input field and button that calculate addition and subtraction then show answer into toast , apply appropriate validation.

Create example of Activity that have two number input field and button that calculate multiplication and division then show answer into Snack bar, apply appropriate validation.

Create example of Activity that have one number input field and button that verify number that even or odd on tap button.

Create example of Activity that have one number input field and button that verify number that prime or not prime on tap button.

Create example of Activity that contain one spinner having types of shape and two number input field and one button that calculate area according to selected shape on entered value and apply appropriate validation.

Create example of Activity that contain spinner and fill from resource data.

Create example of Activity that contain spinner that load value with user for loop between year 2000 – 2020.

Create example of Activity that contain one text input and text view, text view show data on text input field's value change.

Create example of Activity that contain email input field, address text input with multi line and button that print enter data on tap, apply appropriate validation.

Create example of Activity that contain toolbar and notification icon, on tap notification icon show page having text 'Notification' on center of page, and main page contain image view which show image from url.

Create example of Activity that contain toolbar and its default title and one text input field and button that replace toolbar title with given value to input field, apply appropriate validation.

Create example of Activity that contain one text input field, button and spinner, on tap button inputted value show into spinner drop down list, apply appropriate validation.

Create example of Activity that contain one number input field, two button that Add and show and spinner also, on tap add button inputted value show into spinner drop down list, and on tap show button show only odd value into next page, apply appropriate validation

Create example of Activity that contain one number input field, two button that Add and show and spinner also, on tap add button inputted value show into spinner drop down list, and on tap show button show only even value into next page, apply appropriate validation

Create example of Activity that have email and password input field and submit button, fire validation on tap button if not valid and print information on valid and clear data if valid password text should not be readable.

Create example of Activity that contain button that open date picker dialog and show date after select date.

Create example of Activity that contain button that open date picker dialog and show date after selection into Text View.

Create example of Activity that contain button that open date picker dialog and show date after selection into Text View. Date should not be selectable after today date.

Create example of Activity that contain button that open Time picker dialog and show time after selection into Text View.

Create example of Activity that contain button that open date picker dialog and show date after selection into Text View. Date should be selectable before 18 year.

Create example of Activity that contain radio button group Male and Female, and button that open date picker dialog, By default female is selected, if male is selected then date should be selectable before 20 year and male is selected then date should be selectable before 18 year. Show date into text view on select.

Create example of Activity that contain spinner that load value with user for loop between year 2000 – 2020, and should show last select item on reopen app.

Create example of Activity that contain Text input field and button, when tap button entered value save and when re open app last saved value show into text view, apply appropriate validation.

Create example of Activity that contain checkboxes One, Two... Six. And text view that show checked text into sequence and remove on deselect. Like One, Two, Five, Six

Create example of Activity that contain checkboxes One, Two... Six. And text view that show checked text and last selected value should show into last and remove on deselect. Like One, Five, Three, Six, Four.

Create example of Activity that contain checkboxes with addition and subtraction, two number input field and button that calculate value based on check operation and

show answer into text view, show both answer when two checked, apply appropriate validation.

Create example of Activity that contain radio button group multiplication and division, two number input field and button that calculate value based on selected operation and show answer into text view, apply appropriate validation.

Create example of Activity that contain seek bar and show changed value into text view when seek bar value change.

Create example of Activity that contain rating bar 5Star and button that show given rating value on tap into text view, apply appropriate validation.

Create example of Activity that contain Card view with specified round corner and elevation and show hello world text into text view and image that contains image with full length to card view.

Crete example of Activity that contain switch that on and off and Progress bar that middle of page and show progress when switch is on and gone when switch off. By default switch is on.

Crete example of Activity that contain button having gradient background combination with two color

Crete example of Activity that contain button having gradient background combination with three color

Crete example of Activity that contain button having round corner background.

Crete example of Activity that contain button having round corner background with gradient drawable.

Crete example of Activity that contain text view having gradient background with border.

Crete example of Activity that contain text view having round corner background with border and gradient drawable.

Excesice 4

- Write a Program to print log for all life cycle methods of service .
- Write a Program that print all life cycle method log of bind service .
- Write a Program and start service multiple times and print log of service life cycle message and check behaviour of it .
- Write a Program and only start service and do not stop it and check behaviour of service .
- Write a Program and stop service before start it and check behaviour of it .
- Write a Program that print “Start” when service started and print “Stop” when service stop .
- Write a Program that start service when user click on start button and stop it when user click stop button .
- Write a Program in which service remain started until edit text is not empty .
- Write a Program in which service remain started until length of edit text data is greater than or equal to 4 .
- Write a Program and stop service when edit text have data greater than 11 and at least two capital letter .
- Write a Program and create one edit text and start service when user write “Start Service” and stop it when user write “Stop Service”
- Write a Program that bind service on click of button 1 and unbind it on click of imageview .
- Write a Program in which service remain bounded until edit text is not empty and unbind it when edittext is empty .
- Write a Program and bind service multiple times and print log of service life cycle message and check behaviour of it .
- Write a Program in which service remain bounded until length of edit text data is greater than or equal to 12 .
- Write a Program and unbind service when edit text have data greater than 7 and at least one capital letter and one small letter .
- Write a Program and unbind service multiple times and check behaviour of it and write down cause of it why this happen .
- Write a Program that start service when app get started and stop the service after 15 min time interval .
- Write a Program and create two edit text and a textview with image and start service when two edit text have data and stop service when one edit text is empty and hide it and textview when service stop .
- Write a a Program that start service when user upload image and show toast message when service started .
- Write a Program that stop service when user delete uploaded image and show toast message when service stop .

Write a Program in which bind service to activity when user upload image and write Bind in edittext .

Write a Program in which unbind service when user remove uploaded image and write Unbind in edittext .

Write a Program that allow user to upload image when service is started otherwise show toast message service is not started yet .

Write a Program that automatically stop service when uploaded image is removed by user .

Write a basic example of intent service on your own .

Write a Program that start service when first item of list is visible to user and stop service when last item of list is reach .

Write a Program that bind service when first item of list is visible to user and unbind service when last item of list is reach .

Write a Program in which list have 20 items in it and stop service when user scroll that list and reach to 10th item of it .

Create one application that shows entire use of bind service and app have some purpose for normal users.

Write a Program to create notification channel

Write a Program that show Toast message Connected when client connected to service and Disconnected when client unbound from it .

Write a Program that print different service behaviour by using onStart command .

Write a Program that start foreground service

Write a Program that start foreground service with notification.

Write a bound service that return your name to connected activity .

Write a Program that play music when service started and stop playing music when service stop .

Write a Program using bind service which print random numbers .

Write a Program that shows toast message when service connected to client .

Write a Program that update time in textview and shows it until service not unbind.

Write a Program of service that will stop after the queue is completed without using stopself and stop service .

Create a service and run it until power is connect to it .

Create a foreground service and run it till power not disconnected and show toast message when it stop .

Develop an app in which it increment count of textview when image is click using service .

Create an app that will repeat alarm after every 30 seconds using service .

Write a Program that send message as " Message From Activity" from activity to service and print log from service when receive .

Write a Program that show difference between service and Intent service

Write a Program that start foreground service with notification and give play pause action on click of notification .

Create Reminder notification app using service .

Develop Music Player application using service .

Excesice 5

Use of Broadcast Receiver
Process To get Broadcast receiver in Activity
Good Practice for Broadcast Receiver
Use of Local Broadcast Receiver
List of System Broadcast and
Make Broadcast for getting all System Broadcast
Use Content Provider
Type of Content Provider
Content Provider Properties and its Behaviour
Make Custom Content Provider
name of Layout ViewGroup
Attribute for LinearLayout
Attribute for Relative Layout
Attribute of Coordinate Layout
Attribute of Constraint Layout
List of Widget in Android
List all Attribute and use of Horizontal Layout
Make Layout file to show all view Horizontal using Horizontal Scroll Layout
Make Layout file to show all view Vertical using ScrollView
Make Example for Custom Braodcast
Make Example to Show Contact Name, number form Contact Content Provider
Use of Media Content Provider
Example for Media content Provider to Show all Images name and Path
Example For Receive Broadcast For Battery Status
Example For Receive Screen Status
Example For Receive Boradcast For System Booting complete
Example For Receive System Broadcast for Network Changes
Example For Custom Broadcast
List of Action for System Braodcast
Intent Filter for Custom Broadcast
Content Uri
Prefix for Content Uri
Authority for Content Uri
data type in Content Uri
Process to Creating Content Provider
Example To Print Content Provider Life cycle State
Query in Content Provider
Example To Create Custom Content Provider wirh Add,update student Data
File Explorer in Android Studio
Find When custom Content Provider database Store in Android Emulator

Layout Attribute to show height and width

Described DP in Layout

Described SP in Layout

Example DP to Pixel and vice versa converter based on Screen dimension

Example SP to Pixel and vice versa converter based on Screen dimension

Differentiate Drawable Folder based on its Screen Size like ldpi, hdpi, xhdpi, xxhdpi

Resource folder Resource for Tablet/large Screen Device

Layout folder in Resource for Tablet/large Screen Device

Make Example with all Layout basic Attributes of ViewGroup and View

Differentiate between ViewGroup and View

Excesice 6

Create example of Fragment that print name of life cycle methods when call that particular method.

Create example of one Activity that contain two fragment and main fragment contain button to navigate other fragment.

Create example of one Activity and fragment with use of fragment add and replace method, both the two fragment mange back stack and title.

Create example of one Activity and fragment contain text input field and button and on tap button change fragment title with inputted text, apply appropriate validation.

Create example of one Activity and fragment contain text input field and button and on tap button change fragment title with inputted text, apply appropriate validation.

Create example of one Activity and fragment contain switch that on and off label and image view, on switch on - off change image icon of same image view.

Create example of one Activity and fragment contain switch that on and off label, on switch on - off change page background.

Create example of one Activity and fragment contain switch that on and off label and text view, on switch on - off change text view style, color and text of same text view.

Create example of one Activity and fragment contain switch that on and off label, on switch on - off change text input field text and color.

Create example of one Activity with fragment with linear layout that contains number of textviews to show your name, age, mobile, email, address and your skills.

Create example of one Activity with fragment with Relative layout that contains number of textviews to show your name, age, mobile, email, address and your skills.

Create example of one Activity with fragment with Scroll view and linear layout that contain 5 image view with different types of text, style, color and size, 3 image view with different image and icon, Two buttons, one radio buttons group.

Create example of one Activity with fragment with Scroll view and Relative layout that contain 5 image view with different types of text, style, color and size, 3 image view with different image and icon, Two buttons, one switch that One – Off, on switch on - off change page background.

Create example of one Activity with fragment that contain image view, button and progress bar with frame layout and linear layout and manage visibility of progress bar on pap button and on retap show progress bar.

Create example of one Activity with fragment that contain Scroll view, linear layout and relative layout into same page and scroll.

Create example of one Activity with fragment and create appropriate design of fragment page with the use of Scroll view, linear layout and relative layout and number of widgets controls, scroll view should be scroll able to show all item of page.

Create example of one Activity with fragment and create appropriate design for registration page that take 8 types of user personal details with validation with use of Scroll view and linear layout.

Create example of one Activity with fragment and create appropriate design for registration page that take 8 types of user personal details with validation with use of Scroll view and relative layout.

Create example of one Activity with fragment have functionality of user registration and login. With use of Scroll view and linear layout.

Create example of one Activity with fragment have functionality of user registration and login. With use of Scroll view and relative layout.

Create example of one Activity and fragment contain switch that on and off label, on switch on - off change textview text and style and color.

Create example of recyclerview with 10 items.

Create example of recyclerview with card view with 10 items.

Create example of horizontal recyclerview with 10 items.

Create example of recyclerview using grid layout manager with 10 items.

Create example of horizontal recyclerview using grid layout manager with 10 items, list show 2 items in one row.

Create example of horizontal recyclerview using grid layout manager with 10 items, list show 3 items in one row.

Create example of recyclerview with card view and apply functionality with load more and load unique 20 items per time and at last list have total 100 items.

Create example of recyclerview with card view and apply functionality with load more and load unique 20 items per time and at last list have total 100 items, while load more show progress bar for 3second then load latest items.

Create example of recyclerview using grid layout manager and apply functionality with load more and load unique 10 items per time and at last list have total 100 items, list show 2 items in one row.

Create example of seek bar an on change seek bar value change size and text of same textview.

Create example of seek bar an on change seek bar value change size image view.

Create example of seek bar and text input field, seek bar have 1 to 20 range, on seek bar change, input field should be clear and change the max length as per seek bar value.

Create example of view pager with tab layout have 4 pages with different types of design.

Create example of tab layout with text and icon and view pager have 4 pages with different types of design.

Create example of view pager with bottom navigation have 4 pages with different types of design.

Create example of design view using include another layout.

Create example of design view which divide page equally into two part and both have different color.

Create example of design view which divide page equally into three part and all have different color.

Create example to demonstrate <View/> with different color and show horizontally middle of page.

Create example to demonstrate <View/> with different color and show vertically middle of page

Create example to demonstrate <Space/>

Create example to demonstrate nested scroll view and design should be scrollable to show hidden view.

Create example to demonstrate nested scroll view with app bar layout and design should be scrollable to show hidden view.

Create example to demonstrate search view into app bar which search employee department wise, And show matched data into list.

Create example to demonstrate search view with auto complete list which search employee department wise, And show matched data into list.

Create example of one Activity and fragment contain text input field and add break point where inputted text callback get every time and debug that and check for which value get on change input field value.

Create example text input field and button and after change input field value, when tap on button add break point on button click listener and debug for input text value length.

Write report for steps of running app with emulator of android studio.

Write report for steps of running app with real device.