

Android Studio

Assignment 1

classmate

Date _____

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Q. What is an Activity in Android? Explain its role in app development with an example.

⇒ An activity is a single screen in an Android app, like a page in a website.

It is where the user interacts with the app. For example, in a messaging app, one activity shows the chat list, and another shows the chat window.

Ex-
public class MainActivity extends
AppCompatActivity {
 @Override
 protected void onCreate(Bundle

savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity_main);

}

}

Here, MainActivity is an Activity that loads the layout file activity_main.xml.

Q. Write the basic steps to create an Activity using XML layout and Java/Kotlin code.

⇒ Steps to create an Activity:

(i) Create XML layout: Design the screen (eg, activity_main.xml).

(ii) Create Java/Kotlin file: Write logic (eg, MainActivity.java).

(ii) Link XML to Activity: Use
`setContentView(R.layout.activity_main)`
 inside `onCreate()`.

(iv) Register in Manifest: Add the Activity in
 AndroidManifest.xml.

Ex- XML

`<TextView android:text="Hello" />`

Java

`setContentView(R.layout.activity_main);`

Q.3. What is an Intent in Android? Mention
 its types with one use case for each.

→ An Intent is used to start another activity or
 perform an action.
 It tells android what to do.

Types:

(i) Explicit Intent: Opens a specific activity.

Example: open Second Activity from Main Activity.

Java

`Intent i = new`

`Intent (MainActivity.this,
 SecondActivity.class);`
`startActivity(i);`

(ii) Implicit Intent: Asks Android to perform a
 general action.
 Example open a web page.

`Intent i = new`

`Intent (Intent.ACTION_VIEW,
 Uri.parse("https://google.com"));`
`startActivity(i);`

Q. 4. Differentiate between Implicit and Explicit Intents with simple examples.

Feature	Explicit Intent	Implicit Intent
Purpose	Open a specific activity in your app.	perform an action using another app.
Example Code	<code>new Intent(this, SecondActivity.class);</code>	<code>new Intent(Intent.ACTION_VIEW, Uri.parse("https://google.com"));</code>
Use Case	Move from one screen to another	Share text, open maps, or call a number

Q. What are UI components in Android?

Name any four common components and their use.

→ UI components are elements used to build the app interface.

They allow users to see and interact with the app.

Common components:

- (i) TextView - Displays text.
- (ii) EditText - Allows user input.
- (iii) Button - Performs an action when clicked.
- (iv) ImageView - Shows images.