H. J. Thim Trust's
THEEM COLLEGE OF ENGINEERING

App

Date :

Assignment No :- 02.

Q1) Explain difference type of Layout in Android.

⇒
- Android linear layout :- Linear layout is a ViewGroup Subclass, used to provide child View element one by one either in a particular direction either horizontally or vertically based on the orientation property.
- Android Relative layout :- Relative layout is a ViewGroup Subclass, used to specify the position of child View element relative to each other like or relative to the present.
- Android Constraint layout :- Constraint layout is a ViewGroup Subclass, used to specify the position of a layout constraint for every child View relative to other views present.
- Android frame layout :- frame layout is a ViewGroup Subclass, used to specify the position of View element it contain on the top of each other to display only single View inside the frame layout.
- Android Table layout :- Table Layout is a ViewGroup Subclass, Used to display the child View element in row and columns.
- Android Web View :- Webview is a browser which is used to display the child View element in row and column.

- Android List View :- List View is a View Group. Used to display the Scrollable list of item in Single Column.

- Android Grid View :- Grid View is a ViewGroup which is Used to display Scrollable list of item in Grid View of row and Columns.

Q2) Explain different attributes of layout used in Android.

⇒ 1) Android:id :- Used to Specify the id of the View.

2) android:layout_width :- Used to declare the width of View and View Group.

3) android:layout_height :- Used to declare the height of View and View Group.

4) android:layout_MarginLeft :- Used to declare the extra Space used in the left Side of View and ViewGroup element.

5) android:layout_MarginRight :- Used to declare the extra Space used in the right Side of View and ViewGroup element.

6) android:layout_MarginTop :- Used to declare the extra Space used in the Top Side of View and ViewGroup element.

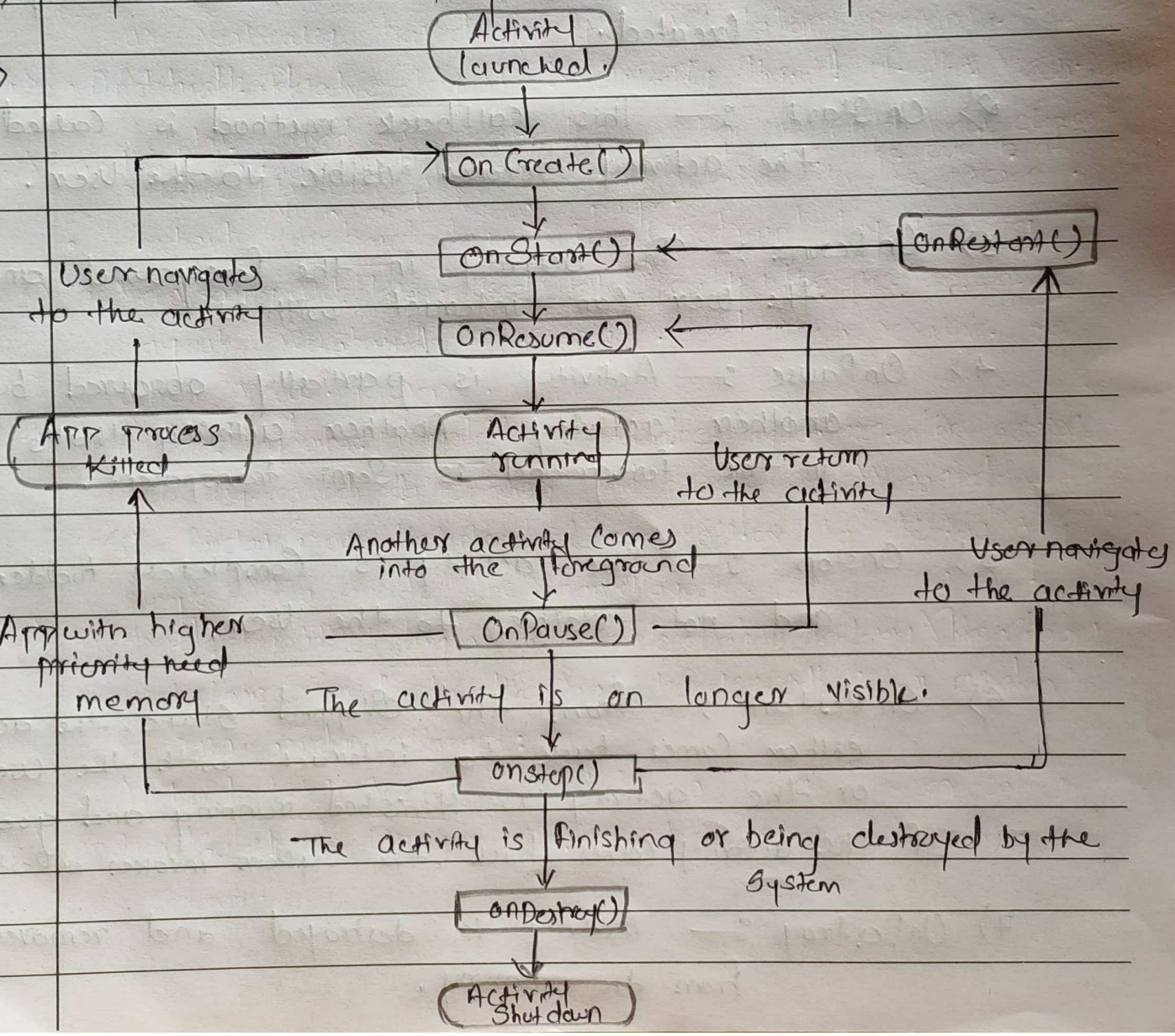
Date :

7) android:layout_marginBottom :- Used to declare the extra space used in the bottom side of View and ViewGroup element.

8) android:layout_Gravity :- Used to define how child Views are positioned in the layout.

Q3) Explain Android lifecycle with neat diagram.

⇒



- Android Activity lifecycle is Controlled by 7 method of android.app.Activity Class.
- The Android Activity is the Subclass of ContextThemeWrapper Class.
- An activity is the Single Screen in android. It is like window or frame of Java.
- Android Activity lifecycle method.

1) OnCreate :— In this State, the activity is Created.

2) OnStart :— This callback method is called when the activity becomes visible to the user.

3) OnResume :— The activity in the foreground and the user can interact with it.

4) OnPause :— Activity is partially obscured by another activity. Another activity that is in the foreground is Semi-transparent.

5) Onstop :— The activity is Completely hidden and not visible to the User.

6) OnRestart :— From the Stopped State, the activity either comes back to interact with the user or the activity is finished running and goes away

If the activity comes back, the System invokes onRestart()

7) OnDestroy :— Activity is destroyed and removed from the memory.

H. J. Thim Trust's
THEEM COLLEGE OF ENGINEERING

Date :

Q4) What is intent ? Explain its two type with an example.

⇒ - An Intent is a Simple Message Object that is used to Communicate between android Component such as activities, Content provider, broadcast receiver and Services. Intent are also used to transfer data between activites.
- Intents are used Generally for Starting a new activity using Start Activity().

Intent is of two types :-

1. Implicit Intent
2. Explicit Intent.

1. Implicit Intent :- An Implicit intent Specifies an action that can invoke any app on the devices, to be able to perform an action. Using an Implicit Intent is useful when you app Cannot perform the action but other apps probably can and you'd like the user to pick which app to use.

Syntax :

```
Intent i = new Intent();
i. SetAction(Intent.ACTION_SEND);
```

Ex :-

```
intent intent = new Intent(Intent.ACTION_VIEW);
intent.setData(Uri.parse("http://www.abc.com"));
StartActivity(intent);
```

Explicit Intents :- Explicit Android Intent is the Intent in which one can explicitly define the Component that need to be called by an Android System.

```
Intent Send = new Intent ( MainActivity.this,
                    Second Activity.class)
    Start Activity (send);
```

An we should declare about Second activity in Manifest.xml file on else it going to show run time reception. Sample declaration is as shown below.

```
<activity android:name = ", SecondActivity"> </activity>.
```

H.J. Thim Trust's
THEEM COLLEGE OF ENGINEERING

Date :

Q5) Explain building block of Android.

⇒ There are some necessary building block that an Android application consist of. These loosely coupled component are bound by the application manifest file which contains description of each component and how they interact. The manifest file also contains the apps metadata, Its hardware configuration and platform requirement external libraries and required permission.

There are following main component of an Android app.

1. Activities :- Activities are said to be presentation layer of our application. The UI of our application is build around one or more extension of the Activity class. By using fragment of the Activity class. public class MainActivity extend Activity().

2. Services :- These are like invisible workers of our app. These component run at backend, updating your data source and Activites, triggering Notification and also broadcast Intent. A Service can be used as a subclass of class Service: public class Service Name extend Service { }.

3. Content Providers :- It is used to manage & persist the application data also typically interact with SQL database. They are also responsible for sharing data beyond the application boundaries.

```
public Class ContentProviderName extend
        ContentProvider {
    public Void on Create () {}
}
```

4. Intents :- It is a powerful inter-application Message-passing framework. They are extensively used throughout Android. Intent can be used to Start and Stop Activites and Services, to broadcast message System-wide or to an explicit Activity, Service or Broadcast Receiver or to request an action be performed on a particular piece of data.

5. Broadcast Reciever :- They are known to be intent listens as they enable your application to listen the Intent that Satisfy the Matching Criteria Specified by us. Broadcast Received Intent thereby making them perfect for Creating event driven application.

Date :

6) Widget :- These are the small visual application component that you can find on the home screen of the device - They are special variation of Broadcast Receivers that allow us to create dynamic, interactive application component for user to embed on their Home Screen.

7) Notification :- Notification are the application alerts that are used to draw user attention to some particular app event without stealing focus a interrupting the current Activity of the users. They are generally used to grab user's attention when the application is not visible or active, particularly from within a Service or Broadcast Receiver.
Example : Email popups, etc.