Slip no – 17

Q1. Write an android code to make phone call using Intent.

Add Call Permission in AndroidManifest.xml file

<uses-permission android:name="android.permission.CALL\_PHONE" />

<application

<!-- Your application settings -->

</application>

activity\_main.xml

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *xmlns:android*="http://schemas.android.com/apk/res/android"  
 *xmlns:tools*="http://schemas.android.com/tools"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:layout\_margin*="16dp"  
 *tools:context*=".MainActivity" >  
  
 <Button  
 *android:onClick*="call"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Call" />  
  
</RelativeLayout>

MainActivity.java

*package* com.example.activitylifecycle;  
  
*import* android.content.Intent;  
*import* android.net.Uri;  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 *public void* call(View view) {  
 Intent dialIntent = *new* Intent(Intent.***ACTION\_DIAL***);  
 dialIntent.setData(Uri.*parse*("tel:1234567890"));  
 startActivity(dialIntent);  
 }  
}

Q3. Construct an Android Application to accept a number and calculate Factorial and Sum of Digits of a given number using Context Menu.

* Create menu folder under the res folder and create the file context\_menu.xml copy the code
* app\src\main\res\menu\context\_menu.xml

<menu *xmlns:android*="http://schemas.android.com/apk/res/android">  
 <item  
 *android:id*="@+id/action\_factorial"  
 *android:title*="Calculate Factorial"/>  
 <item  
 *android:id*="@+id/action\_sum\_digits"  
 *android:title*="Calculate Sum of Digits"/>  
</menu>

activity\_main.xml

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *xmlns:android*="http://schemas.android.com/apk/res/android"  
 *xmlns:tools*="http://schemas.android.com/tools"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *android:padding*="16dp"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/number\_input"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter a number"  
 *android:inputType*="number" />  
  
 <Button  
 *android:id*="@+id/calculate\_button"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/number\_input"  
 *android:layout\_alignParentEnd*="true"  
 *android:layout\_marginTop*="55dp"  
 *android:layout\_marginEnd*="152dp"  
 *android:text*="Calculate" />  
  
 <TextView  
 *android:id*="@+id/result\_text"  
 *android:layout\_width*="311dp"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/calculate\_button"  
 *android:layout\_alignParentEnd*="true"  
 *android:layout\_marginTop*="40dp"  
 *android:layout\_marginEnd*="52dp" />  
</RelativeLayout>

MainActivity.java

*package* com.example.activitylifecycle;  
  
  
*import* androidx.appcompat.app.AppCompatActivity;  
*import* android.os.Bundle;  
*import* android.view.*ContextMenu*;  
*import* android.view.*MenuItem*;  
*import* android.view.View;  
*import* android.widget.Button;  
*import* android.widget.EditText;  
*import* android.widget.TextView;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* EditText numberInput;  
 *private* TextView resultText;  
 *private* Button calculateButton;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 numberInput = findViewById(R.id.*number\_input*);  
 resultText = findViewById(R.id.*result\_text*);  
 calculateButton = findViewById(R.id.*calculate\_button*);  
  
 registerForContextMenu(calculateButton);  
  
 calculateButton.setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
 openContextMenu(v);  
 }  
 });  
 }  
  
 @Override  
 *public void* onCreateContextMenu(*ContextMenu* menu, View v, *ContextMenu*.*ContextMenuInfo* menuInfo) {  
 *super*.onCreateContextMenu(menu, v, menuInfo);  
 getMenuInflater().inflate(R.menu.*context\_menu*, menu);  
 }  
  
 @Override  
 *public boolean* onContextItemSelected(*MenuItem* item) {  
 *int* id = item.getItemId();  
 *if* (id == R.id.*action\_factorial*) {  
 calculateFactorial();  
 *return true*;  
 } *else if* (id == R.id.*action\_sum\_digits*) {  
 calculateSumOfDigits();  
 *return true*;  
 }  
 *return super*.onContextItemSelected(item);  
 }  
  
 *private void* calculateFactorial() {  
 *// Calculate factorial here  
 // Retrieve the number from the EditText  
 int* num = Integer.*parseInt*(numberInput.getText().toString());  
 *int* factorial = 1;  
 *for* (*int* i = 2; i <= num; i++) {  
 factorial \*= i;  
 }  
 resultText.setText("Factorial: " + factorial);  
 }  
  
 *private void* calculateSumOfDigits() {  
 *// Calculate sum of digits here  
 // Retrieve the number from the EditText  
 int* num = Integer.*parseInt*(numberInput.getText().toString());  
 *int* sum = 0;  
 *while* (num > 0) {  
 sum += num % 10;  
 num /= 10;  
 }  
 resultText.setText("Sum of Digits: " + sum);  
 }  
}