Create an android application that demonstrate alert dialog box. **(10M)**

Create an android application that produce Notification. **(20M)**

**OR**

Create an android application to accept two numbers and find power

And Average. display the result on second activity using context menu. **(20M)**

**……………………………………………………………………………………………………….**

Create an android application that on/off the bulb using **toggle button (10M)**

Screen(membership form) **(20M)**

**Or**

Create an android application to send SMS message, after sending message display the entered text on next activity **(20M)**

**……………………………………………………………………………………………………….**

Create an android application to change an image on the screen. **(10M)**

**Ans:**

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:orientation="vertical"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:src="@drawable/image1"  
 android:scaleType="fitCenter"  
 android:adjustViewBounds="true"/>  
  
 <Button  
 android:id="@+id/changeImageButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Change Image"/>  
  
</LinearLayout>

Place the images you want to use in the res/drawable directory. For example, save the first image as image1.png and the second image as image2.png.

MainActivity.java

import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.ImageView;  
  
public class MainActivity extends AppCompatActivity {  
  
 private ImageView imageView;  
 private Button changeImageButton;  
  
 private int currentImageIndex = 1;  
 private int[] imageIds = { R.drawable.*image1*, R.drawable.*image2* };  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 imageView = findViewById(R.id.*imageView*);  
 changeImageButton = findViewById(R.id.*changeImageButton*);  
  
 changeImageButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 // Increment the image index and handle wrapping around  
 currentImageIndex = (currentImageIndex + 1) % imageIds.length;  
  
 // Set the new image in the ImageView  
 imageView.setImageResource(imageIds[currentImageIndex]);  
 }  
 });  
 }  
}

Demonstrate option menu ,context menu and popup menu in android.**(20M)**

OR

Demonstrate Array Adapter using List View to display list of Country.**(20M)**

**Ans**

**Activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:orientation="vertical"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <ListView  
 android:id="@+id/countryListView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"/>  
  
</LinearLayout>

**MainActivity.java**

import androidx.appcompat.app.AppCompatActivity;  
  
import android.annotation.SuppressLint;  
import android.os.Bundle;  
import android.widget.ArrayAdapter;  
import android.widget.ListView;  
  
public class MainActivity extends AppCompatActivity {  
  
 private ListView countryListView;  
 private String[] countries = { "Afghanistan", "Albania", "Algeria", "Andorra", "Angola", "Argentina", "Armenia", "Australia", "Austria", "Azerbaijan" };  
  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 countryListView = findViewById(R.id.*countryListView*);  
  
 ArrayAdapter<String> adapter = new ArrayAdapter<>(this, android.R.layout.*simple\_list\_item\_1*, countries);  
 countryListView.setAdapter(adapter);  
 }  
}

**……………………………………………………………………………………………………….**

Create an simple application which shows Life Cycle Of Activity.

{Use log}. **(10M)**

Create the following layout which is changing android spinner text size with styles. **(20M)**

**Ans:**

1. Create a new Android project in Android Studio.
2. In the layout XML file for the main activity (activity\_main.xml), add a Spinner:

xml

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:orientation="vertical"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:padding="16dp"

tools:context=".MainActivity">

<Spinner

android:id="@+id/spinner"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:entries="@array/country\_array"

android:textSize="@style/SpinnerTextStyle" />

</LinearLayout>

1. Create a new XML file named styles.xml in the res/values directory. Add the following code to define a custom style for the Spinner text size:

xml

<resources>

<style name="SpinnerTextStyle" parent="android:Widget.TextView.SpinnerItem">

<item name="android:textSize">20sp</item>

</style>

</resources>

1. Create a new XML file named arrays.xml in the res/values directory. Add the following code to define an array of country names:

xml

<resources>

<string-array name="country\_array">

<item>Afghanistan</item>

<item>Albania</item>

<item>Algeria</item>

<item>Andorra</item>

<item>Angola</item>

<!-- Add more countries here -->

</string-array>

<

**OR**

Create an android application to send email.**(20M)**

…………………………………………………………………………………………………………

Design the following -add border to an Android Layout.**(10M)**

**Ans**

1. Create a new Android project in Android Studio.
2. In your app's res/drawable folder, create a new file called border.xml with the following content:

xml

<shape xmlns:android="http://schemas.android.com/apk/res/android"

android:shape="rectangle">

<stroke

android:width="2dp"

android:color="#000000" />

<solid android:color="#ffffff" />

<padding

android:left="2dp"

android:top="2dp"

android:right="2dp"

android:bottom="2dp" />

</shape>

1. In your app's activity\_main.xml layout file, add a LinearLayout and set the background to the border drawable:

xml

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:id="@+id/main\_layout"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="@drawable/border"

android:orientation="vertical"

android:padding="16dp">

<!-- Add your UI elements here -->

</LinearLayout>

This creates a LinearLayout with a white background and a black border.

1. Add your UI elements inside the LinearLayout. For example, you can add a TextView and a Button:

xml

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:id="@+id/main\_layout"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="@drawable/border"

android:orientation="vertical"

android:padding="16dp">

<TextView

android:id="@+id/text\_view"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Hello, World!"

android:textSize="24sp"

android:textColor="#000000" />

<Button

android:id="@+id/button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Click Me" />

</LinearLayout>

Create an android application with Login Screen On Successful login, gives message to next Activity(without using database).**(20M)**

**Ans**

**Activity\_main.xml**

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/username"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Username" />  
  
 <EditText  
 android:id="@+id/password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Password"  
 android:inputType="textPassword" />  
  
 <Button  
 android:id="@+id/login"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Login" />  
   
  
</LinearLayout>

MainActivity.java

import android.annotation.SuppressLint;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import java.text.BreakIterator;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText usernameEditText;  
 private EditText passwordEditText;  
 private Button loginButton;  
  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 usernameEditText = findViewById(R.id.*username*);  
 passwordEditText = findViewById(R.id.*password*);  
 loginButton = findViewById(R.id.*login*);  
  
 loginButton.setOnClickListener(new View.OnClickListener() {  
 private BreakIterator errorTextView;  
  
 @Override  
 public void onClick(View v) {  
 String username = usernameEditText.getText().toString();  
 String password = passwordEditText.getText().toString();  
  
 if (username.equals("admin") && password.equals("admin123")) {  
 Intent intent = new Intent(MainActivity.this, MainActivity2.class);  
 intent.putExtra("message", "Login Successful!");  
 startActivity(intent);  
 }  
 else {  
 // Invalid credentials, display error message  
 Toast.*makeText*(MainActivity.this, "Invalid", Toast.*LENGTH\_SHORT*).show();  
  
 }  
 }  
 });  
 }  
}

Activity\_main2.xml

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:gravity="center"  
 android:orientation="vertical">  
  
 <TextView  
 android:id="@+id/message"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textSize="20sp" />  
  
</LinearLayout>

MainActivity2.java

import android.content.Intent;  
import android.os.Bundle;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity2 extends AppCompatActivity {  
  
 private TextView messageTextView;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main2*);  
  
 messageTextView = findViewById(R.id.*message*);  
  
 Intent intent = getIntent();  
 String message = intent.getStringExtra("message");  
  
 messageTextView.setText(message);  
 }  
}

**OR**

Create First Activity to accept information like Employee First Name, Middle Name, LastName, Salary, Address, Email ID and display all information on Second Activity when user click on Submit button**.(20M)**

**Ans**

**Activity\_xml**

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/editFirstName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="First Name" />  
  
 <EditText  
 android:id="@+id/editMiddleName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Middle Name" />  
  
 <EditText  
 android:id="@+id/editLastName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Last Name" />  
  
 <EditText  
 android:id="@+id/editSalary"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Salary" />  
  
 <EditText  
 android:id="@+id/editAddress"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Address" />  
  
 <EditText  
 android:id="@+id/editEmail"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Email ID" />  
  
 <Button  
 android:id="@+id/submitBtn"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Submit" />  
  
</LinearLayout>

**MainActivity.java**

import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText editFirstName, editMiddleName, editLastName, editSalary, editAddress, editEmail;  
 private Button submitBtn;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 editFirstName = findViewById(R.id.*editFirstName*);  
 editMiddleName = findViewById(R.id.*editMiddleName*);  
 editLastName = findViewById(R.id.*editLastName*);  
 editSalary = findViewById(R.id.*editSalary*);  
 editAddress = findViewById(R.id.*editAddress*);  
 editEmail = findViewById(R.id.*editEmail*);  
 submitBtn = findViewById(R.id.*submitBtn*);  
  
 submitBtn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String firstName = editFirstName.getText().toString();  
 String middleName = editMiddleName.getText().toString();  
 String lastName = editLastName.getText().toString();  
 String salary = editSalary.getText().toString();  
 String address = editAddress.getText().toString();  
 String email = editEmail.getText().toString();  
  
 Intent intent = new Intent(MainActivity.this, MainActivity2.class);  
 intent.putExtra("firstName", firstName);  
 intent.putExtra("middleName", middleName);  
 intent.putExtra("lastName", lastName);  
 intent.putExtra("salary", salary);  
 intent.putExtra("address", address);  
 intent.putExtra("email", email);  
 startActivity(intent);  
 }  
 });  
 }  
}

**activity\_main2.xml**

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity2">  
  
 <TextView  
 android:id="@+id/txtFirstName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/txtMiddleName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/txtLastName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/txtSalary"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/txtAddress"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
 <TextView  
 android:id="@+id/txtEmail"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content" />  
  
</LinearLayout>

**MainActivity2.java**

import android.content.Intent;  
import android.os.Bundle;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity2 extends AppCompatActivity {  
  
 private TextView txtFirstName, txtMiddleName, txtLastName, txtSalary, txtAddress, txtEmail;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main2*);  
  
 txtFirstName = findViewById(R.id.*txtFirstName*);  
 txtMiddleName = findViewById(R.id.*txtMiddleName*);  
 txtLastName = findViewById(R.id.*txtLastName*);  
 txtSalary = findViewById(R.id.*txtSalary*);  
 txtAddress = findViewById(R.id.*txtAddress*);  
 txtEmail = findViewById(R.id.*txtEmail*);  
  
 Intent intent = getIntent();  
 String firstName = intent.getStringExtra("firstName");  
 String middleName = intent.getStringExtra("middleName");  
 String lastName = intent.getStringExtra("lastName");  
 String salary = intent.getStringExtra("salary");  
 String address = intent.getStringExtra("address");  
 String email = intent.getStringExtra("email");  
  
 txtFirstName.setText("First Name: " + firstName);  
 txtMiddleName.setText("Middle Name: " + middleName);  
 txtLastName.setText("Last Name: " + lastName);  
 txtSalary.setText("Salary: " + salary);  
 txtAddress.setText("Address: " + address);  
 txtEmail.setText("Email ID: " + email);  
 }  
}

**……………………………………………………………………………………………………….**

Q. Create an Android App, it reads the Students Details (Name, Surname, Class, Gender, Hobbies Marko) and display the all information in another activity in table format on click of Submit button **[10 Marks]**

**Ans**

**Activity\_main.xml**

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/editName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Name"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editSurname"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Surname"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editClass"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Class"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editGender"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Gender"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editHobbies"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Hobbies"  
 android:minHeight="48dp" />  
  
 <Button  
 android:id="@+id/submitBtn"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Submit" />  
  
</LinearLayout>

Activity\_display.xml

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/editName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Name"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editSurname"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Surname"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editClass"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Class"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editGender"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Gender"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/editHobbies"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Hobbies"  
 android:minHeight="48dp" />  
  
 <Button  
 android:id="@+id/submitBtn"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Submit" />  
  
</LinearLayout>

Mainactivity.java

import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText editName, editSurname, editClass, editGender, editHobbies;  
 private Button submitBtn;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 editName = findViewById(R.id.*editName*);  
 editSurname = findViewById(R.id.*editSurname*);  
 editClass = findViewById(R.id.*editClass*);  
 editGender = findViewById(R.id.*editGender*);  
 editHobbies = findViewById(R.id.*editHobbies*);  
 submitBtn = findViewById(R.id.*submitBtn*);  
  
 submitBtn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String name = editName.getText().toString();  
 String surname = editSurname.getText().toString();  
 String studentClass = editClass.getText().toString();  
 String gender = editGender.getText().toString();  
 String hobbies = editHobbies.getText().toString();  
  
 Intent intent = new Intent(MainActivity.this, DisplayActivity.class);  
 intent.putExtra("name", name);  
 intent.putExtra("surname", surname);  
 intent.putExtra("class", studentClass);  
 intent.putExtra("gender", gender);  
 intent.putExtra("hobbies", hobbies);  
 startActivity(intent);  
 }  
 });  
 }  
}

MainActivity.java

import android.os.Bundle;  
import android.widget.TableLayout;  
import android.widget.TableRow;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class DisplayActivity extends AppCompatActivity {  
  
 private TableLayout tableLayout;  
 private String[] labels = {"Name", "Surname", "Class", "Gender", "Hobbies"};  
 private String[] data;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_display*);  
  
 tableLayout = findViewById(R.id.*tableLayout*);  
  
 if (getIntent().getExtras() != null) {  
 data = new String[5];  
 data[0] = getIntent().getStringExtra("name");  
 data[1] = getIntent().getStringExtra("surname");  
 data[2] = getIntent().getStringExtra("class");  
 data[3] = getIntent().getStringExtra("gender");  
 data[4] = getIntent().getStringExtra("hobbies");  
  
 createTable();  
 }  
 }  
  
 private void createTable() {  
 TableRow headerRow = new TableRow(this);  
 for (String label : labels) {  
 TextView textView = new TextView(this);  
 textView.setText(label);  
 textView.setPadding(16, 16, 16, 16);  
 headerRow.addView(textView);  
 }  
 tableLayout.addView(headerRow);  
  
 TableRow dataRow = new TableRow(this);  
 for (String item : data) {  
 TextView textView = new TextView(this);  
 textView.setText(item);  
 textView.setPadding(16, 16, 16, 16);  
 dataRow.addView(textView);  
 }  
 tableLayout.addView(dataRow);  
 }  
}

Q Create an Android Application that Demonstrate TimePicker and display Selected Time on TextView **[20 Macks]**

**Ans**

**Activity\_main.xml**

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <Button  
 android:id="@+id/pickTimeBtn"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Pick Time" />  
  
 <TextView  
 android:id="@+id/selectedTimeText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="16dp"  
 android:text="Selected Time: " />  
  
</LinearLayout>

MainActivity.java

import android.app.TimePickerDialog;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
import android.widget.TimePicker;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import java.text.SimpleDateFormat;  
import java.util.Calendar;  
import java.util.Locale;  
  
public class MainActivity extends AppCompatActivity {  
  
 private Button pickTimeBtn;  
 private TextView selectedTimeText;  
  
 private Calendar calendar;  
 private SimpleDateFormat timeFormat;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 pickTimeBtn = findViewById(R.id.*pickTimeBtn*);  
 selectedTimeText = findViewById(R.id.*selectedTimeText*);  
  
 calendar = Calendar.*getInstance*();  
 timeFormat = new SimpleDateFormat("hh:mm a", Locale.*getDefault*());  
  
 pickTimeBtn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 int hour = calendar.get(Calendar.*HOUR\_OF\_DAY*);  
 int minute = calendar.get(Calendar.*MINUTE*);  
  
 TimePickerDialog timePickerDialog = new TimePickerDialog(MainActivity.this,  
 new TimePickerDialog.OnTimeSetListener() {  
 @Override  
 public void onTimeSet(TimePicker view, int hourOfDay, int minute) {  
 calendar.set(Calendar.*HOUR\_OF\_DAY*, hourOfDay);  
 calendar.set(Calendar.*MINUTE*, minute);  
 updateSelectedTime();  
 }  
 }, hour, minute, false);  
  
 timePickerDialog.show();  
 }  
 });  
 }  
  
 private void updateSelectedTime() {  
 String selectedTime = timeFormat.format(calendar.getTime());  
 selectedTimeText.setText("Selected Time: " + selectedTime);  
 }  
}

**OR**

Q. Create a Simple calculator **[20 Marks]**

**Xml**

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/number1EditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Number 1"  
 android:inputType="numberDecimal"  
 android:minHeight="48dp" />  
  
 <EditText  
 android:id="@+id/number2EditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Number 2"  
 android:inputType="numberDecimal"  
 android:minHeight="48dp" />  
  
 <Button  
 android:id="@+id/addButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Add" />  
  
 <Button  
 android:id="@+id/subtractButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Subtract" />  
  
 <Button  
 android:id="@+id/multiplyButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Multiply" />  
  
 <Button  
 android:id="@+id/divideButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Divide" />  
  
 <TextView  
 android:id="@+id/resultTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="24sp"  
 android:textStyle="bold"  
 android:gravity="center"  
 android:layout\_marginTop="16dp" />  
  
</LinearLayout>

**MainActivity.xml**

import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText number1EditText, number2EditText;  
 private Button addButton, subtractButton, multiplyButton, divideButton;  
 private TextView resultTextView;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 number1EditText = findViewById(R.id.*number1EditText*);  
 number2EditText = findViewById(R.id.*number2EditText*);  
 addButton = findViewById(R.id.*addButton*);  
 subtractButton = findViewById(R.id.*subtractButton*);  
 multiplyButton = findViewById(R.id.*multiplyButton*);  
 divideButton = findViewById(R.id.*divideButton*);  
 resultTextView = findViewById(R.id.*resultTextView*);  
  
 addButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 calculateResult('+');  
 }  
 });  
  
 subtractButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 calculateResult('-');  
 }  
 });  
  
 multiplyButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 calculateResult('\*');  
 }  
 });  
  
 divideButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 calculateResult('/');  
 }  
 });  
 }  
  
 private void calculateResult(char operator) {  
 String number1Str = number1EditText.getText().toString();  
 String number2Str = number2EditText.getText().toString();  
  
 if (number1Str.isEmpty() || number2Str.isEmpty()) {  
 resultTextView.setText("Please enter both numbers");  
 return;  
 }  
  
 double number1 = Double.*parseDouble*(number1Str);  
 double number2 = Double.*parseDouble*(number2Str);  
 double result = 0;  
  
 switch (operator) {  
 case '+':  
 result = number1 + number2;  
 break;  
 case '-':  
 result = number1 - number2;  
 break;  
 case '\*':  
 result = number1 \* number2;  
 break;  
 case '/':  
 if (number2 == 0) {  
 resultTextView.setText("Cannot divide by zero");  
 return;  
 }  
 result = number1 / number2;  
 break;  
 }  
  
 resultTextView.setText("Result: " + result);  
 }  
}

**……………………………………………………………………………………………………….**

Q Write an android code to make phone call using Intent **[10 Marks]** Q Create an android application that demonstrate Spinner**[20 Marks]**

**OR**

Q. Construct an Android Application to accept a number and calculate Factorial and Sum of Digits of a given number using Context Menu **[20 Marks]**

**Ans**

**Activity\_main.xml**

<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/numberEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter a number"  
 android:inputType="number" />  
  
 <Button  
 android:id="@+id/calculateButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/numberEditText"  
 android:text="Calculate"  
 android:layout\_marginTop="16dp" />  
  
 <TextView  
 android:id="@+id/factorialTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/calculateButton"  
 android:text="Factorial: "  
 android:layout\_marginTop="16dp" />  
  
 <TextView  
 android:id="@+id/sumTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/factorialTextView"  
 android:text="Sum of Digits: "  
 android:layout\_marginTop="16dp" />  
  
</RelativeLayout>

**MainActivity.java**

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;  
import android.widget.Toast;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText numberEditText;  
 private Button calculateButton;  
 private TextView factorialTextView, sumTextView;  
  
 private int number;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 numberEditText = findViewById(R.id.*numberEditText*);  
 calculateButton = findViewById(R.id.*calculateButton*);  
 factorialTextView = findViewById(R.id.*factorialTextView*);  
 sumTextView = findViewById(R.id.*sumTextView*);  
  
 registerForContextMenu(factorialTextView);  
 registerForContextMenu(sumTextView);  
  
 calculateButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String numberStr = numberEditText.getText().toString();  
 if (numberStr.isEmpty()) {  
 Toast.*makeText*(MainActivity.this, "Please enter a number", Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 number = Integer.*parseInt*(numberStr);  
  
 // Calculate factorial  
 long factorial = calculateFactorial(number);  
 factorialTextView.setText("Factorial: " + factorial);  
  
 // Calculate sum of digits  
 int sum = calculateSumOfDigits(number);  
 sumTextView.setText("Sum of Digits: " + sum);  
 }  
 });  
 }  
  
 @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) {  
 switch (item.getItemId()) {  
 case R.id.*copyMenuItem*:  
 String text = "";  
 if (item.getGroupId() == R.id.*factorialGroup*) {  
 text = factorialTextView.getText().toString();  
 } else if (item.getGroupId() == R.id.*sumGroup*) {  
 text = sumTextView.getText().toString();  
 }  
 copyTextToClipboard(text);  
 Toast.*makeText*(MainActivity.this, "Copied to clipboard", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 default:  
 return super.onContextItemSelected(item);  
 }  
 }  
  
 private long calculateFactorial(int n) {  
 if (n == 0) {  
 return 1;  
 }  
 return n \* calculateFactorial(n - 1);  
 }  
  
 private int calculateSumOfDigits(int n) {  
 int sum = 0;  
 while (n != 0) {  
 sum += n % 10;  
 n /= 10;  
 }  
 return sum;  
 }  
  
 private void copyTextToClipboard(String text) {  
 // Implement your logic to copy text to clipboard here  
 }  
}

**……………………………………………………………………………………………………….**

Create a Simple Application which shows the Life Cycle of Activity. **[10 Marks]**

Ans

MainActivity.java

package com.example.lifecycle;  
import android.os.Bundle;  
import android.util.Log;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private static final String *TAG* = "MainActivity";  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Log.*d*(*TAG*, "onCreate() called");  
 }  
  
 @Override  
 protected void onStart() {  
 super.onStart();  
 Log.*d*(*TAG*, "onStart() called");  
 }  
  
 @Override  
 protected void onResume() {  
 super.onResume();  
 Log.*d*(*TAG*, "onResume() called");  
 }  
  
 @Override  
 protected void onPause() {  
 super.onPause();  
 Log.*d*(*TAG*, "onPause() called");  
 }  
  
 @Override  
 protected void onStop() {  
 super.onStop();  
 Log.*d*(*TAG*, "onStop() called");  
 }  
  
 @Override  
 protected void onDestroy() {  
 super.onDestroy();  
 Log.*d*(*TAG*, "onDestroy() called");  
 }  
}

activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout 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:gravity="center"  
 android:orientation="vertical"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Lifecycle of Activity"  
 android:textSize="24sp" />  
  
</LinearLayout>

Run the code and see in logcat

Create an Android application to demonstrate Progress Dialog Boxing AsyncTask**. [20 Marks]**

**Mainactivity.java**

import android.app.ProgressDialog;  
import android.os.AsyncTask;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.ProgressBar;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private Button startButton;  
 private TextView resultTextView;  
 private ProgressBar progressBar;  
  
 private ProgressDialog progressDialog;  
 private MyTask myTask;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 startButton = findViewById(R.id.*startButton*);  
 resultTextView = findViewById(R.id.*resultTextView*);  
 progressBar = findViewById(R.id.*progressBar*);  
  
 startButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 myTask = new MyTask();  
 myTask.execute();  
 }  
 });  
 }  
  
 private class MyTask extends AsyncTask<Void, Integer, String> {  
  
 @Override  
 protected void onPreExecute() {  
 super.onPreExecute();  
 progressDialog = new ProgressDialog(MainActivity.this);  
 progressDialog.setMessage("Processing...");  
 progressDialog.setCancelable(false);  
 progressDialog.show();  
 }  
  
 @Override  
 protected String doInBackground(Void... params) {  
 // Simulate a time-consuming task  
 for (int i = 1; i <= 10; i++) {  
 try {  
 Thread.*sleep*(1000);  
 } catch (InterruptedException e) {  
 e.printStackTrace();  
 }  
 publishProgress(i \* 10); // Update progress  
 }  
 return "Task completed";  
 }  
  
 @Override  
 protected void onProgressUpdate(Integer... values) {  
 super.onProgressUpdate(values);  
 int progress = values[0];  
 progressBar.setProgress(progress);  
 }  
  
 @Override  
 protected void onPostExecute(String result) {  
 super.onPostExecute(result);  
 progressDialog.dismiss();  
 resultTextView.setText(result);  
 }  
 }  
}

**activity\_main.xml**

<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">  
  
 <Button  
 android:id="@+id/startButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Start Task" />  
  
 <ProgressBar  
 android:id="@+id/progressBar"  
 style="?android:attr/progressBarStyleHorizontal"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/startButton"  
 android:layout\_marginTop="16dp"  
 android:max="100" />  
  
 <TextView  
 android:id="@+id/resultTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/progressBar"  
 android:layout\_marginTop="16dp"  
 android:textSize="18sp" />  
  
</RelativeLayout>

**OR**

Create an Android Application that demonstrate DatePicker and DatePickerDailog. **[20 Marks]**

**Ans**

**Activity\_main.xml**

<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">  
  
 <Button  
 android:id="@+id/show\_date\_picker\_button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Select Date"  
 android:layout\_centerInParent="true"/>  
  
 <TextView  
 android:id="@+id/selected\_date\_text"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/show\_date\_picker\_button"  
 android:layout\_centerHorizontal="true"  
 android:paddingTop="16dp"/>  
  
</RelativeLayout>

**MainActivity.java**

import android.annotation.SuppressLint;  
import android.app.DatePickerDialog;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.DatePicker;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import java.util.Calendar;  
  
public class MainActivity extends AppCompatActivity {  
  
 private TextView selectedDateText;  
 private Calendar calendar;  
  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 selectedDateText = findViewById(R.id.*selected\_date\_text*);  
 Button showDatePickerButton = findViewById(R.id.*show\_date\_picker\_button*);  
  
 calendar = Calendar.*getInstance*();  
  
 showDatePickerButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 int year = calendar.get(Calendar.*YEAR*);  
 int month = calendar.get(Calendar.*MONTH*);  
 int day = calendar.get(Calendar.*DAY\_OF\_MONTH*);  
  
 DatePickerDialog datePickerDialog = new DatePickerDialog(MainActivity.this,  
 new DatePickerDialog.OnDateSetListener() {  
 @Override  
 public void onDateSet(DatePicker view, int selectedYear, int monthOfYear, int dayOfMonth) {  
 // Update the selected date TextView  
 String selectedDate = dayOfMonth + "/" + (monthOfYear + 1) + "/" + selectedYear;  
 selectedDateText.setText(selectedDate);  
 }  
 }, year, month, day);  
  
 datePickerDialog.show();  
 }  
 });  
 }  
}

…………………………………………………………………………………………………………

Create a Simple Application, which reads a positive number from the user and display its factorial value in another activity. **[10 Marks]**

**Ans**

**Activity\_main.xml**

<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/numberEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter a positive number"  
 android:inputType="number"  
 android:layout\_marginBottom="16dp"/>  
  
 <Button  
 android:id="@+id/calculateButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/numberEditText"  
 android:text="Calculate"  
 android:layout\_marginTop="16dp"/>  
  
</RelativeLayout>

**MainActivity.java**

import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private EditText numberEditText;  
 private Button calculateButton;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 numberEditText = findViewById(R.id.*numberEditText*);  
 calculateButton = findViewById(R.id.*calculateButton*);  
  
 calculateButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String numberString = numberEditText.getText().toString();  
 int number = Integer.*parseInt*(numberString);  
  
 if (number >= 0) {  
 Intent intent = new Intent(MainActivity.this, MainActivity2.class);  
 intent.putExtra("number", number);  
 startActivity(intent);  
 }  
 }  
 });  
 }  
}

**Activity\_main2.xml**

<LinearLayout 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:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity2">  
  
 <TextView  
 android:id="@+id/resultTextView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textSize="18sp"/>  
  
</LinearLayout>

**MainActivity2.java**

import android.annotation.SuppressLint;  
import android.content.Intent;  
import android.os.Bundle;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity2 extends AppCompatActivity {  
  
 private TextView resultTextView;  
  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main2*);  
  
 resultTextView = findViewById(R.id.*resultTextView*);  
  
 Intent intent = getIntent();  
 int number = intent.getIntExtra("number", 0);  
  
 long factorial = calculateFactorial(number);  
  
 resultTextView.setText("Factorial of " + number + " is " + factorial);  
 }  
  
 private long calculateFactorial(int number) {  
 long factorial = 1;  
 for (int i = 1; i <= number; i++) {  
 factorial \*= i;  
 }  
 return factorial;  
 }  
}

Create an Android application that plays an audio (song) in the background. Audio will not be stopped even if you switch to another activity. To stop the audio, you need to stop the service.**(20 Marks)**

**OR**

Create an Android Application to display satellite view of current location using Google Map **[20 Marks]**

…………………………………………………………………………………………………………..

Create an Android Application that will change color of the College Name on click of PushButton and change the font size, font style of text view using xml.**[10 Marks]**

**Ans**

**Activity\_main.xml**

<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"  
 tools:context=".MainActivity">  
  
 <Button  
 android:id="@+id/btnChangeColor"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Change Color"  
 android:layout\_marginTop="16dp"  
 android:layout\_centerHorizontal="true"  
 android:onClick="changeColor" />  
  
 <TextView  
 android:id="@+id/tvCollegeName"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="PCCCS"  
 android:textColor="@color/default\_color"  
 android:textSize="20sp"  
 android:layout\_below="@id/btnChangeColor"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="16dp" />  
  
</RelativeLayout>

MainActivity.java

import android.graphics.Color;  
import android.graphics.Typeface;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
 private TextView tvCollegeName;  
 private boolean isColorChanged = false;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 tvCollegeName = findViewById(R.id.*tvCollegeName*);  
 }  
  
 public void changeColor(View view) {  
 if (isColorChanged) {  
 // Change color to default  
 tvCollegeName.setTextColor(getResources().getColor(R.color.*default\_color*));  
 } else {  
 // Change color to a different color  
 tvCollegeName.setTextColor(Color.*RED*);  
 }  
  
 isColorChanged = !isColorChanged;  
 }  
}

Go to res/values/color.xml

Color.xml

<?xml version="1.0" encoding="utf-8"?>  
<resources>  
 <color name="purple\_200">#FFBB86FC</color>  
 <color name="purple\_500">#FF6200EE</color>  
 <color name="purple\_700">#FF3700B3</color>  
 <color name="teal\_200">#FF03DAC5</color>  
 <color name="teal\_700">#FF018786</color>  
 <color name="black">#FF000000</color>  
 <color name="white">#FFFFFFFF</color>  
  
 <color name="default\_color">#000000</color>  
  
  
</resources>

Create an Android Application to find the factorial of a number and Display the Resulton alert box.**[20 Marks]**

**Activity\_main.xml**

<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"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/etNumber"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:inputType="number"  
 android:hint="Enter a number"  
 android:layout\_marginTop="16dp"  
 android:layout\_centerHorizontal="true" />  
  
 <Button  
 android:id="@+id/btnCalculate"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Calculate Factorial"  
 android:layout\_below="@id/etNumber"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="16dp"  
 android:onClick="calculateFactorial" />  
  
</RelativeLayout>

**MainActivity.java**

package com.example.myapplication;  
  
import android.app.AlertDialog;  
import android.content.DialogInterface;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
 private EditText etNumber;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 etNumber = findViewById(R.id.*etNumber*);  
 }  
  
 public void calculateFactorial(View view) {  
 String input = etNumber.getText().toString();  
 int number = Integer.*parseInt*(input);  
  
 long factorial = 1;  
 for (int i = 1; i <= number; i++) {  
 factorial \*= i;  
 }  
  
 // Display result in an alert dialog box  
 AlertDialog.Builder builder = new AlertDialog.Builder(this);  
 builder.setTitle("Factorial Result");  
 builder.setMessage("The factorial of " + number + " is " + factorial);  
 builder.setPositiveButton("OK", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialog, int which) {  
 dialog.dismiss();  
 }  
 });  
  
 AlertDialog dialog = builder.create();  
 dialog.show();  
 }  
}

**OR**

Create an Android App, it reads the Students Details (Name, Surname, Class, Gender, Hobbies, Marks) and display the all information in another activity in table format on click of Submit button **(20 Marks)**

…………………………………………………………………………………………………………..

Create a Simple Application, that performs Arithmetic Operations (Use constraintLayout). **(10 Marks)**

Create an Android Application that sends the Notification on click of the button and displays the notification message on the second activity **[20 Marks)**

**OR**

Create an android Application for performing the following operation on the table

Customer (id, name, address, phno). (use SQLite database)

1) Insert New Customer Details

ii) Show All the Customer Details on Toast Message **[20 Marks]**

…………………………………………………………………………………………………………

Create an Android Application to accept two numbers and find power and Average: Display the result on the next activity on Button click

**[10 Marks]**

Q. Create an Android application that creates a custom Alert Dialog containing Friends Name and onClick of Friend Name Button greet accordingly. **[20 Marks]**

**OR**

Q. Create an Android Application to perform Zoom In, Zoom Out operation and display Satellite view, on Google Map.**[20 Marks]**

……………………………………………………………………………………………………….

Q Create a Simple Application Which Send-Hello! message from one activity to another with help of Button (Use Intent). **[10 Marks]**

**Main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical"

xmlns:app="http://schemas.android.com/apk/res-auto" xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/textBox" android:hint="Enter Your Message"/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/passButton"

android:text="Pass"/>

</LinearLayout>

**activity\_main2.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" xmlns:app="http://schemas.android.com/apk/res-auto" xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

tools:context=".MainActivity2">

<TextView

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:text=""

android:id="@+id/text"/>

</LinearLayout>

**MainActivity.java**

package com.example.slipap1;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

EditText textBox;

Button passButton;

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

textBox = (EditText)findViewById(R.id.textBox);

passButton = (Button)findViewById(R.id.passButton); passButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

String str = textBox.getText().toString();

Intent intent = new Intent(getApplicationContext(), MainActivity2.class); intent.putExtra("message", str);

startActivity(intent);

}

});

}

}

**MainActivity2.java**

package com.example.slipap1;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.widget.TextView;

public class MainActivity2 extends AppCompatActivity {

TextView text;

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main2);

text = (TextView)findViewById(R.id.text);

Intent Intent = getIntent();

String str = Intent.getStringExtra("message");

text.setText(str);

}

}

Create an Android Application that Demonstrates ListView and Onclick of Lid Display the Toast **[20 Marks]**

**OR**

Create an Android application to perform following operations on table Student (Sid,Sname phno). Use autoincrement for Sid and Perform following Operations.

a) Add Student and display its information

b) Delete Student **[20 Marks]**

………………………………………………………………………………………………………….

Create an Android Application that Demonstrate Radio Button

**[10 Marks]**

Q Create an Android application to demonstrate phone call using Implicit Intent **[20 Marks]**

OR

Q. Write an android code to turn ON/OFF the Wi-Fi. **[20 Marks]**

………………………………………………………………………………………………………….

Create an Android App with Login Screen. (Without Using Databuse& use Table Layout) On successful login, gives message go to next Activity **[10 Marks]**

Q. Create an android application to demonstrate how to use a service to download a file from the Internet on click of Download Button. Once done, the service notifies the activity via a broadcast

receiver that the download is complete**.[20 Marks]**

OR

Q. Create application to send email with attachment.**[20 Marks]**

…………………………………………………………………………………………………………..

Q Write an Android application to accept two numbers from the user, and display them, but reject input if both numbers are greater than 10 and asks for two new numbers **[10 Marks]**

Write a program to find the specific location of an Android device and display details of the place like Address line, city with Geocoding .

**(20 Marks)**

**OR**

Q Create table Company (id, name, address, phno). Create Application for Performing the

following operation on the table

a) Insert New Company details

b) Show All Company details **[20 Marks]**

**…………………………………………………………………………………………………….**

Create an Android Application that Demonstrate Switch and Toggle Button **(10 Marks]**

**Main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout

xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

android:orientation="vertical"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:padding="16dp"

tools:context=".MainActivity">

<TextView

android:id="@+id/switch\_text\_view"

android:text="Switch: OFF"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textSize="24sp"

android:gravity="center"/>

<Switch

android:id="@+id/switch\_button"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<TextView

android:id="@+id/toggle\_text\_view"

android:text="Toggle: OFF"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textSize="24sp"

android:gravity="center"/>

<ToggleButton

android:id="@+id/toggle\_button"

android:textOn="ON"

android:textOff="OFF"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

</LinearLayout>

**Main.java**

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.widget.CompoundButton;

import android.widget.Switch;

import android.widget.TextView;

import android.widget.ToggleButton;

public class MainActivity extends AppCompatActivity {

private TextView switchTextView, toggleTextView;

private Switch switchButton;

private ToggleButton toggleButton;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

switchTextView = findViewById(R.id.switch\_text\_view);

switchButton = findViewById(R.id.switch\_button);

toggleTextView = findViewById(R.id.toggle\_text\_view);

toggleButton = findViewById(R.id.toggle\_button);

switchButton.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {

@Override

public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {

if (isChecked) {

switchTextView.setText("Switch: ON");

} else {

switchTextView.setText("Switch: OFF");

}

}

});

toggleButton.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {

@Override

public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {

if (isChecked) {

toggleTextView.setText("Toggle: ON");

} else {

toggleTextView.setText("Toggle: OFF");

}

}

});

}

}

Q. Create a fragment that has its own UI and enable your activities to

communicate with fragments. **(20 Marks)**

**OR**

Q. Demonstrate Array Adapter using List View to display list of fruits

**Main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout

xmlns:android="http://schemas.android.com/apk/res/android"

android:orientation="vertical"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<ListView

android:id="@+id/list\_view\_fruits"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

</LinearLayout>

**Main.java**

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.widget.ArrayAdapter;

import android.widget.ListView;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

ListView listView = findViewById(R.id.list\_view\_fruits);

// Define an array of fruits

String[] fruits = {"Apple", "Banana", "Cherry", "Dragonfruit", "Elderberry", "Fig", "Grape"};

// Create an ArrayAdapter to convert the array into views for the ListView

ArrayAdapter<String> adapter = new ArrayAdapter<>(this, android.R.layout.simple\_list\_item\_1, fruits);

// Set the adapter to the ListView

listView.setAdapter(adapter);

}

}

**[20 Marks]**

…………………………………………………………………………………………………………

Q create android application to change Font Size, Color and Font Family of String **[10 Marks]**

Q. Create First Activity to accept information like Student First Name, Middle Name, Last Name, Date of birth, Address, Email ID and display all information on Second Activity when user click on the Submit button **[20 Marks]**

**Main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

android:padding="16dp">

<EditText

android:id="@+id/et\_first\_name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="First Name"/>

<EditText

android:id="@+id/et\_middle\_name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Middle Name"/>

<EditText

android:id="@+id/et\_last\_name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Last Name"/>

<EditText

android:id="@+id/et\_dob"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Date of Birth (MM/DD/YYYY)"/>

<EditText

android:id="@+id/et\_address"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Address"/>

<EditText

android:id="@+id/et\_email"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Email ID"/>

<Button

android:id="@+id/btn\_submit"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Submit"/>

</LinearLayout>

**Main.java**

package com.example.loginform;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

EditText etFirstName, etMiddleName, etLastName, etDob, etAddress, etEmail;

Button btnSubmit;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

etFirstName = findViewById(R.id.et\_first\_name);

etMiddleName = findViewById(R.id.et\_middle\_name);

etLastName = findViewById(R.id.et\_last\_name);

etDob = findViewById(R.id.et\_dob);

etAddress = findViewById(R.id.et\_address);

etEmail = findViewById(R.id.et\_email);

btnSubmit = findViewById(R.id.btn\_submit);

btnSubmit.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String firstName = etFirstName.getText().toString().trim();

String middleName = etMiddleName.getText().toString().trim();

String lastName = etLastName.getText().toString().trim();

String dob = etDob.getText().toString().trim();

String address = etAddress.getText().toString().trim();

String email = etEmail.getText().toString().trim();

Intent intent = new Intent(MainActivity.this,MainActivity2.class);

intent.putExtra("FIRST\_NAME", firstName);

intent.putExtra("MIDDLE\_NAME", middleName);

intent.putExtra("LAST\_NAME", lastName);

intent.putExtra("DOB", dob);

intent.putExtra("ADDRESS", address);

intent.putExtra("EMAIL", email);

startActivity(intent);

}

});

}

}

**Activity\_main2.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

android:padding="16dp">

<TextView

android:id="@+id/tv\_display\_name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textStyle="bold"

android:textSize="20sp"

android:layout\_marginBottom="16dp"/>

<TextView

android:id="@+id/tv\_display\_dob"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textStyle="bold"

android:textSize="20sp"

android:layout\_marginBottom="16dp"/>

<TextView

android:id="@+id/tv\_display\_address"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textStyle="bold"

android:textSize="20sp"

android:layout\_marginBottom="16dp"/>

<TextView

android:id="@+id/tv\_display\_email"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textStyle="bold"

android:textSize="20sp"/>

</LinearLayout>

**Activity\_main2.java**

package com.example.loginform;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.content.Intent;

import android.os.Bundle;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity2 extends AppCompatActivity {

TextView tvDisplayName, tvDisplayDob, tvDisplayAddress, tvDisplayEmail;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main2);

tvDisplayName = findViewById(R.id.tv\_display\_name);

tvDisplayDob = findViewById(R.id.tv\_display\_dob);

tvDisplayAddress = findViewById(R.id.tv\_display\_address);

tvDisplayEmail = findViewById(R.id.tv\_display\_email);

Intent intent = getIntent();

String firstName = intent.getStringExtra("FIRST\_NAME");

String middleName = intent.getStringExtra("MIDDLE\_NAME");

String lastName = intent.getStringExtra("LAST\_NAME");

String dob = intent.getStringExtra("DOB");

String address = intent.getStringExtra("ADDRESS");

String email = intent.getStringExtra("EMAIL");

String fullName = firstName + " " + middleName + " " + lastName;

tvDisplayName.setText(fullName);

tvDisplayDob.setText(dob);

tvDisplayAddress.setText(address);

tvDisplayEmail.setText(email);

}

}

**OR**

Q. Create new contact for designing following layout.**(20 Marks)**

…………………………………………………………………………………………………………..

Q. Create a Simple Application Which Send Hi message from one activity to another with help of Button (Use Intent) [10 Marks]

**activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" android:orientation="vertical"

xmlns:app="http://schemas.android.com/apk/res-auto" xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/textBox" android:hint="Enter Your Message"/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/passButton"

android:text="Pass"/>

</LinearLayout>

**activity\_main2.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android" xmlns:app="http://schemas.android.com/apk/res-auto" xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

tools:context=".MainActivity2">

<TextView

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:text=""

android:id="@+id/text"/>

</LinearLayout>

**MainActivity.java**

package com.example.slipap1;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

EditText textBox;

Button passButton;

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

textBox = (EditText)findViewById(R.id.textBox);

passButton = (Button)findViewById(R.id.passButton); passButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

String str = textBox.getText().toString();

Intent intent = new Intent(getApplicationContext(), MainActivity2.class); intent.putExtra("message", str);

startActivity(intent);

}

});

}

}

**MainActivity2.java**

package com.example.slipap1;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.widget.TextView;

public class MainActivity2 extends AppCompatActivity {

TextView text;

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main2);

text = (TextView)findViewById(R.id.text);

Intent Intent = getIntent();

String str = Intent.getStringExtra("message");

text.setText(str);

}

}

Q Create a custom "Contact" layout to hold multiple pieces of information, including: Photo, Name, Contact Number, E-mail id.

**[20 Marks]**

**OR**

Q. Create an application to demonstrate date and time picker

**[20 Marks]**

**Main.xml**

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<TextView

android:id="@+id/textView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Date time Picker Demo!"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintHorizontal\_bias="0.526"

app:layout\_constraintLeft\_toLeftOf="parent"

app:layout\_constraintRight\_toRightOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.092" />

<EditText

android:id="@+id/in\_date"

android:layout\_width="201dp"

android:layout\_height="91dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentLeft="true"

android:layout\_alignParentTop="true"

android:layout\_marginBottom="32dp"

app:layout\_constraintBottom\_toTopOf="@+id/btn\_time"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.49"

app:layout\_constraintStart\_toStartOf="parent"

tools:ignore="SpeakableTextPresentCheck" />

<Button

android:id="@+id/btn\_date"

android:layout\_width="196dp"

android:layout\_height="85dp"

android:layout\_alignBottom="@+id/in\_date"

android:layout\_toEndOf="@+id/in\_date"

android:layout\_toRightOf="@+id/in\_date"

android:text="SELECT DATE"

app:layout\_constraintBottom\_toTopOf="@+id/in\_date"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.497"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.6" />

<EditText

android:id="@+id/in\_time"

android:layout\_width="198dp"

android:layout\_height="72dp"

android:layout\_below="@+id/in\_date"

android:layout\_alignParentStart="true"

android:layout\_alignParentLeft="true"

android:layout\_marginBottom="132dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.483"

app:layout\_constraintStart\_toStartOf="parent"

tools:ignore="SpeakableTextPresentCheck" />

<Button

android:id="@+id/btn\_time"

android:layout\_width="168dp"

android:layout\_height="76dp"

android:layout\_below="@+id/btn\_date"

android:layout\_alignStart="@+id/btn\_date"

android:layout\_alignLeft="@+id/btn\_date"

android:layout\_marginBottom="48dp"

android:text="SELECT TIME" app:layout\_constraintBottom\_toTopOf="@+id/in\_time"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.497"

app:layout\_constraintStart\_toStartOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

**Main.java**

package com.example.datetime;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.app.Activity;

import android.app.TimePickerDialog;

import android.app.DatePickerDialog;

import android.view.View;

import android.view.Menu;

import android.view.MenuItem;

import android.view.View;

import android.widget.Button;

import android.widget.DatePicker;

import android.widget.EditText;

import android.widget.TimePicker;

import java.util.Calendar;

public class MainActivity extends Activity implements View.OnClickListener {

Button btnDatePicker, btnTimePicker; EditText txtDate, txtTime;

private int mYear, mMonth, mDay, mHour, mMinute;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

btnDatePicker = (Button)findViewById(R.id.btn\_date);

btnTimePicker=(Button)findViewById(R.id.btn\_time);

txtDate=(EditText)findViewById(R.id.in\_date);

txtTime=(EditText)findViewById(R.id.in\_time);

btnDatePicker.setOnClickListener(this);

btnTimePicker.setOnClickListener(this);

}

@Override

public void onClick(View v) {

if (v == btnDatePicker) { // Get Current Date

final Calendar c = Calendar.getInstance();

mYear = c.get(Calendar.YEAR);

mMonth = c.get(Calendar.MONTH);

mDay = c.get(Calendar.DAY\_OF\_MONTH);

DatePickerDialog datePickerDialog = new DatePickerDialog(this, new DatePickerDialog.OnDateSetListener() {

@Override

public void onDateSet(DatePicker view, int year, int monthOfYear, int dayOfMonth) {

txtDate.setText(dayOfMonth + "-" + (monthOfYear + 1) + "-" + year);

}

}, mYear, mMonth, mDay);

datePickerDialog.show();

} if (v == btnTimePicker) {

final Calendar c = Calendar.getInstance();

mHour = c.get(Calendar.HOUR\_OF\_DAY);

mMinute = c.get(Calendar.MINUTE);

TimePickerDialog timePickerDialog = new TimePickerDialog(this, new TimePickerDialog.OnTimeSetListener() {

@Override

public void onTimeSet(TimePicker view, int hourOfDay, int minute) {

txtTime.setText(hourOfDay + ":" + minute);

}

}, mHour, mMinute, false);

timePickerDialog.show();

}

}

}

**Menifest.xml**

<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools">

<application

android:allowBackup="true"

android:dataExtractionRules="@xml/data\_extraction\_rules"

android:fullBackupContent="@xml/backup\_rules"

android:icon="@mipmap/ic\_launcher"

android:label="@string/app\_name"

android:supportsRtl="true"

android:theme="@style/Theme.Datetime"

tools:targetApi="31">

<activity

android:name=".MainActivity"

android:exported="true">

<intent-filter>

<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

</intent-filter>

</activity>

</application>

</manifest>

………………………………………………………………………………………………………….

Q. Create following Vertical Scroll View Creation in Android.

**[10 Marks]**

Q Write a program to search a specific location on Google Map

**[20 Marks]**

Q. Write an application to accept a teacher name from user and display the names of students along with subject to whom they are teaching

Create table Student (sno,s\_name,s\_class,s\_addr)

Teacher (tno, t\_name, qualification, experience)

Student-Teacher has Many to Many relationship **[20 Marks]**

**………………………………………………………………………………………………………**