

# **SIR BHAVSINHJI POLYTECHNIC INSTITUTE BHAVNAGAR**

**DEPARTMENT OF INFORMATION TECHNOLOGY  
(AFFILIATED WITH GUJARAT TECHNOLOGICAL UNIVERSITY)**

## **AAD LAB MANUAL**

### **ANDROID APPLICATION DEVELOPMENT**

**Subject Code: 3361602  
Semester: 6<sup>th</sup>**

**Guided by  
J. B. Pandya**

**Name: \_\_\_\_\_**

**Enrollment No: \_\_\_\_\_**

**Div: \_\_\_\_\_ Batch: \_\_\_\_\_**

**GUJARAT TECHNOLOGICAL UNIVERSITY AHMEDABAD  
SIR BHAVSINHJI POLYTECHNIC INSTITUTE  
BHAVNAGAR**



**Certificate**

This is to certify that Mr./Miss. \_\_\_\_\_ of  
Diploma in **Information Technology** Engineering in Semester **6**  
Enrollment No \_\_\_\_\_ has satisfactorily completed his/her  
Term work of Subject Code **3361602** Name of Subject **ANDROID**  
**APPLICATION DEVELOPMENT** during the academic Year **2021-22** and  
Submitted on \_\_\_\_\_

Institute Guide

Head of Department

## INDEX

**Name:** \_\_\_\_\_

**Enrollment No:** \_\_\_\_\_

**Div:** \_\_\_\_\_      **Batch:** \_\_\_\_\_

No	Name of Practical	Page No	Date	Sign	Remarks
1	Create “Hello World” application to “Hello World” in the middle of the screen in the red color with white background.				
2	Create sample application with login module. (Check username and password), validate it for login screen or alert the user with a Toast.				
3	Create and validate a login application using username as Email ID else login button must remain disabled.				
4	Create and Login application and open a browser with any one search engine.				
5	Create an application to display “Hello World” string the number of times user inputs a numeric value. (Example. If user enters 5, the next screen should print “Hello World” five times.)				
6	Create spinner with strings from the resource folder (res >> value folder). On changing spinner value, change image.				
7	Create an application to change screen color as per the user choice from a menu.				
8	Create an application that will display toast (Message) at some regular interval of time.				
9	Create a background application that will open activity on specific time.				
10	Create an application that will have spinner with list of animation names. On selecting animation name, that animation should affect on the images displayed below.				

<b>11</b>	Create an UI listing the diploma engineering branches. If user selects a branch name, display the number of semesters and subjects in each semester				
<b>12</b>	Use content providers and permissions by implementing read phonebook contacts with content providers and display in the list.				
<b>13</b>	Create an application to call a phone number entered by the user the Edit Text.				
<b>14</b>	Create an application that will create database to store username and password.				
<b>15</b>	Create an application to insert, update and delete a record from the database.				

## Practical\_1

**Aim:** Create “Hello World” application to “Hello World” in the middle of the screen in the red color with white background.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_1">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_1">
        <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>

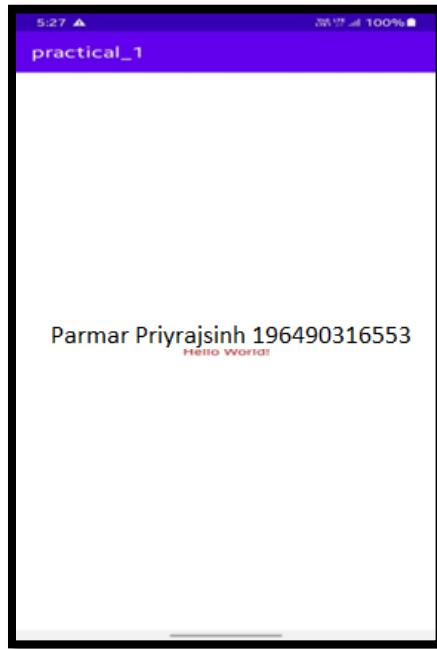
</manifest>
```

- **Activity\_main.xml:** -

```
<?xml version="1.0" encoding="utf-8"?>
<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">
    <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="horizontal"
        tools:context=".MainActivity">
        <TextView
```

```
        android:id="@+id/tv1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:background="@android:color/white"
        android:gravity="center"      android:text="Hello World"
        android:textColor="#ff0000"      android:textSize="36sp"
    />
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Output:** -



## Practical-2

**Aim: Create sample application with login module. (Check username and password), validate it for login screen or alert the user with a Toast.**

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_2">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_2">
        <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>
```

- **Activity\_main.xml**

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

```
<EditText
    android:id="@+id/txtname"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
        android:layout_marginStart="1dp"
        android:layout_marginLeft="1dp"
        android:layout_marginTop="223dp"      android:ems="10"
            android:hint="    Enter User Name"
        android:inputType="textPersonName"      android:textSize="35dp"
            app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    />

<EditText
    android:id="@+id/txtpwd"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="1dp"
    android:layout_marginLeft="1dp"
    android:layout_marginTop="73dp"      android:ems="10"
        android:hint="    Enter Password"
    android:inputType="textPassword"      android:textSize="35dp"
        app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/txtname"
    tools:ignore="MissingConstraints" />

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="132dp"
    android:text="Submit"      android:textSize="40dp"
        app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
/></androidx.constraintlayout.widget.ConstraintLayout>
```

- **Activity\_login.xml**

```
<?xml version="1.0" encoding="utf-
8"?><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=".Login">
<TextView
```

```
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="52dp"
        android:layout_marginLeft="52dp"      android:textSize="40dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.516"      tools:ignore="MissingConstraints"
    >/</androidx.constraintlayout.widget.ConstraintLayout>
```

- **MainActivity.java**

```
package com.example.practical_2;

import
    androidx.appcompat.app.AppCompatActivity;
    import android.os.Bundle; import
    android.view.View; import android.widget.Button;
    import android.content.Intent; import
    android.widget.EditText; import
    android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    String name, pwd;
    Button b;
    EditText e1, e2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name = "Prapared by: - Parmar_Priyrajsinh_196490316553";
        pwd = "2003";
        b = findViewById(R.id.button);      e1
        = findViewById(R.id.txtname);      e2 =
        findViewById(R.id.txtpwd);
        b.setOnClickListener(new View.OnClickListener() {
    @Override
        public void onClick(View v) {
            if ((e1.getText().toString().equals(name) &&
            (e2.getText().toString().equals(pwd))) {
                Intent i = new Intent(getApplicationContext(), Login.class);
                i.putExtra("name", name);
                startActivity(i);
```

```
        }
    else{
        Toast.makeText(getApplicationContext(), "Incorrect UserName or
Password", Toast.LENGTH_SHORT).show();
    }
});
```

- **Login.java**

```
package com.example.practical_2;

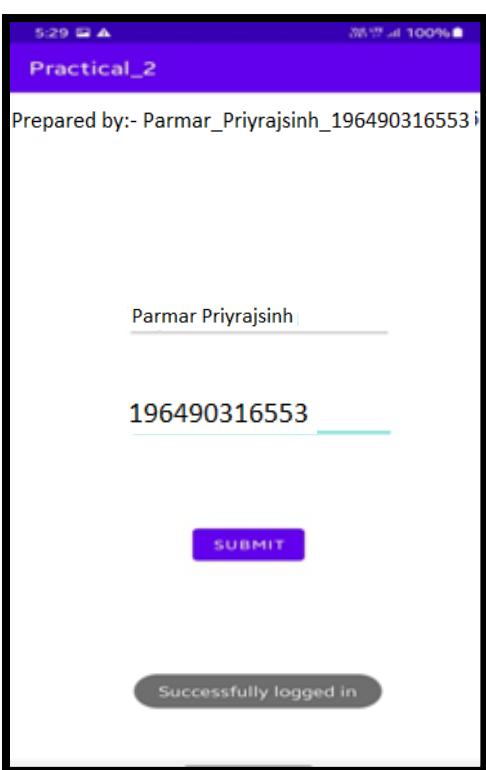
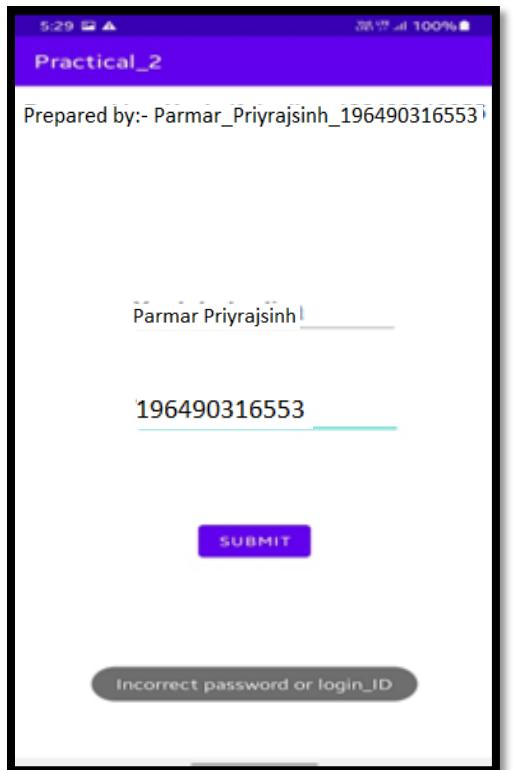
import
androidx.appcompat.app.AppCompatActivity;
import android.content.Intent; import
android.os.Bundle; import
android.widget.TextView; import
android.widget.Toast;

public class Login extends AppCompatActivity {
    TextView tvMsg;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_login);
        tvMsg=(TextView)findViewById(R.id.textView);

        Intent i =getIntent();      //i.getStringExtra("Uname");
        tvMsg.setText("Welcome, "+i.getStringExtra("name"));

        Toast.makeText(this, "Welcome, "+i.getStringExtra("name"),
Toast.LENGTH_SHORT).show();
    }
}
```

- **Output: -**



## Practical – 3

**Aim: Create and validate a login application using username as Email ID else login button must remain disabled.**

**Ans:**

- **Android Manifest File: -**

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_3">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_3">
        <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>
```

- **Activity\_main.xml**

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

```
<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">

    <EditText
        android:id="@+id/txtname"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="1dp"
        android:layout_marginLeft="1dp"
        android:layout_marginTop="220dp"      android:ems="10"
        android:hint="    Enter User Name"
        android:inputType="textPersonName"      android:textSize="35dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    />

    <EditText
        android:id="@+id/txtpwd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="1dp"
        android:layout_marginLeft="1dp"
        android:layout_marginBottom="52dp"      android:ems="10"
        android:hint="    Enter Password"
        android:inputType="textPassword"      android:textSize="35dp"
        app:layout_constraintBottom_toTopOf="@+id/submit"
        app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
    />

    <Button
        android:id="@+id/submit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="34dp"
        android:text="Submit"      android:textSize="40dp"
        app:layout_constraintBottom_toTopOf="@+id/Register"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
    />
    <Button
        android:id="@+id/Register"
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:layout_marginStart="1dp"
        android:layout_marginLeft="1dp"
        android:layout_marginBottom="62dp"      android:text="Don't
        have an account? Register"      android:textSize="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
    /></androidx.constraintlayout.widget.ConstraintLayout>
```

- **Activity\_login.xml**

```
<?xml version="1.0" encoding="utf-
8"?><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=".LoginActivity">
<TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="112dp"
        android:layout_marginRight="112dp"
        android:text="TextView"      android:textSize="40dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    />

</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Activity\_register.xml**

```
<?xml version="1.0" encoding="utf-
8"?><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=".RegisterActivity">
<EditText      android:id="@+id/etUser"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="1dp"
```

```
        android:layout_marginLeft="1dp"
        android:layout_marginTop="246dp"
        android:ems="10"
            android:hint="    Enter Your E-mail"
            android:inputType="textPersonName"      android:textSize="35dp"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
        />
<EditText      android:id="@+id/etPwd"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="1dp"
    android:layout_marginLeft="1dp"
    android:layout_marginTop="55dp"
    android:ems="10"
        android:hint="    Enter Password"
        android:inputType="textPersonName"      android:textSize="35dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/etUser"
        tools:ignore="MissingConstraints" />
<Button
    android:id="@+id/submit"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="115dp"
    android:text="Submit"      android:textSize="40dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
/></androidx.constraintlayout.widget.ConstraintLayout>
```

- **MainAcitivty.java**

```
package com.example.practical_3;

import androidx.annotation.Nullable; import
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent; import
import android.os.Bundle; import android.text.Editable;
import android.text.TextWatcher;
import android.view.KeyEvent;
import android.view.View; import
import android.widget.Button; import
import android.widget.EditText; import
import android.widget.Toast;
```

```
public class MainActivity extends AppCompatActivity {  
    String uname, pwd;  
    Button btnSubmit,btnRegister;  
    EditText etUname, etPwd;  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_main);  
        etUname=(EditText)findViewById(R.id.txtname);  
        etPwd=(EditText)findViewById(R.id.txtpwd);  
        btnSubmit=(Button)findViewById(R.id.submit);  
        btnRegister=(Button)findViewById(R.id.Register);      btnSubmit.setEnabled(false);  
        btnSubmit.setOnClickListener(new View.OnClickListener() {  
            @Override  
            public void onClick(View v) {  
                if((etUname.getText().toString()).equals(uname) &&  
                (etPwd.getText().toString()).equals(pwd)){  
                    Intent i =new  
                    Intent(getApplicationContext(),LoginActivity.class);  
                    i.putExtra("name",uname);          startActivity(i);  
                }  
                else{  
                    Toast.makeText(getApplicationContext(), "Incorrect UserName or  
                    Password", Toast.LENGTH_SHORT).show();  
                }  
            }  
        });  
        etUname.addTextChangedListener(new TextWatcher() {  
            @Override  
            public void beforeTextChanged(CharSequence s, int start, int count, int after) {  
            }  
            @Override  
            public void onTextChanged(CharSequence s, int start, int before, int count) {  
                if(etUname.getText().toString().equals(uname)){  
                    btnSubmit.setEnabled(true);  
                }  
                if(!etUname.getText().toString().equals(uname)){  
                    btnSubmit.setEnabled(false);  
                }  
            }  
            @Override  
            public void afterTextChanged(Editable s) {  
            }  
        });  
    };
```

```
btnRegister.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent i = new Intent(getApplicationContext(), RegisterActivity.class);
        startActivityForResult(i, 1);
    }
});

@Override
protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
    super.onActivityResult(requestCode, resultCode, data);

    if(requestCode==1){
        uname=data.getStringExtra("username");
        pwd=data.getStringExtra("password");
    }
}
}
```

- **Loginactivity.java**

```
package com.example.practical_3;

import
    androidx.appcompat.app.AppCompatActivity;
    import android.content.Intent; import
    android.os.Bundle; import
    android.widget.TextView; import
    android.widget.Toast;
public class LoginActivity extends AppCompatActivity {
    TextView tvMsg;
    String uname[];
    String name;
    String f;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_login);
        tvMsg=(TextView)findViewById(R.id.textView);      Intent i
        =getIntent();      name=i.getStringExtra("name");

        uname=name.split("@");
        f=uname[0];
    }
}
```

```
        tvMsg.setText("Welcome, "+f);

        Toast.makeText(this, "Welcome, "+f, Toast.LENGTH_SHORT).show();
    }
}
```

- **Registeractivity.java**

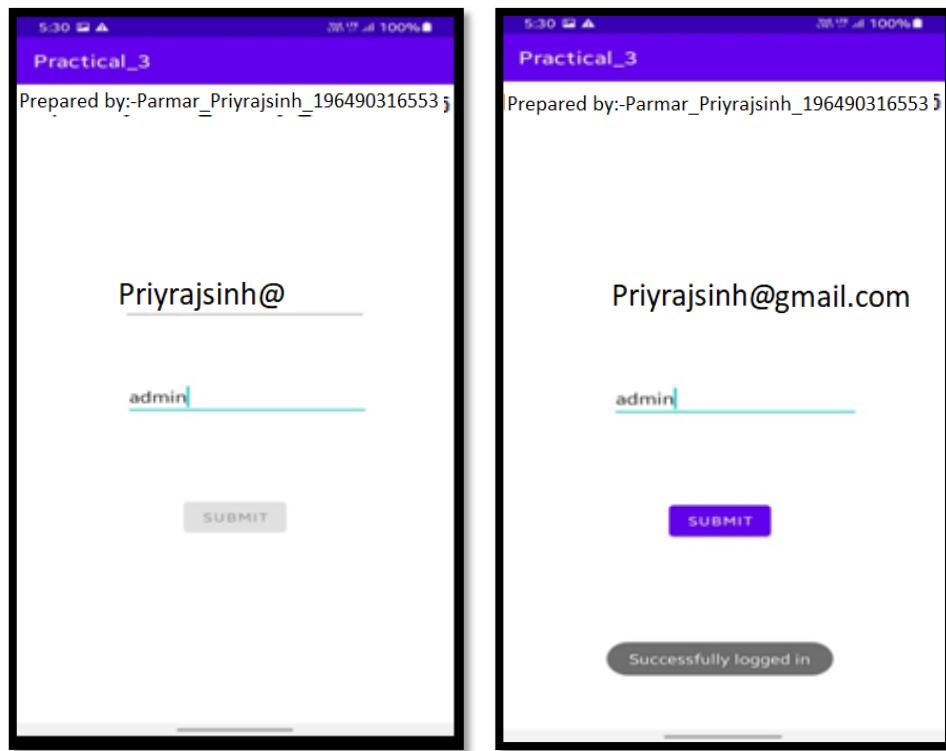
```
package com.example.practical_3;

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 RegisterActivity extends AppCompatActivity {
    Button prev;
    EditText uname,pwd;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_register);
        uname=(EditText)findViewById(R.id.etUser);
        pwd=(EditText)findViewById(R.id.etPwd);

        findViewById(R.id.submit).setOnClickListener(new
View.OnClickListener() {
    @Override
        public void onClick(View v) {
            String name= uname.getText().toString();
            String pass=pwd.getText().toString();
            Intent i =new Intent();
            i.putExtra("username",name);
            i.putExtra("password",pass);
            setResult(1,i);           finish();
        }
    });
}
}
```

- **Output:-**



## Practical – 4

**Aim:** Create and Login application and open a browser with any one search engine.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_4">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_4">
        <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>
```

- **Activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<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:layout_marginLeft="25dp"
        android:layout_marginTop="170dp"
        android:text="@string/tv1_name"      android:textSize="40dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.081" />

    <EditText
        android:id="@+id/etUrl"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="64dp"      android:ems="10"
        android:hint="@string/tv1_hint"
        android:inputType="textPersonName"      android:textSize="40dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView"
        tools:ignore="MissingConstraints" />

    <Button
        android:id="@+id/btnSearch"      android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="122dp"
        android:text="@android:string/search_go"      android:textSize="45dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        tools:ignore="MissingConstraints" />
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="23dp"
```

```
        android:layout_marginRight="23dp"
        android:layout_marginBottom="16dp"
        android:text="Prapared by: -"
        android:text="Yash_Kakadiya_196490316055"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"      tools:ignore="MissingConstraints"
    />

</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
package com.example.practical_4;

import
    androidx.appcompat.app.AppCompatActivity;
    import android.content.Intent; import
    android.net.Uri; import android.os.Bundle; import
    android.view.View; import android.widget.Button;
    import android.widget.EditText;

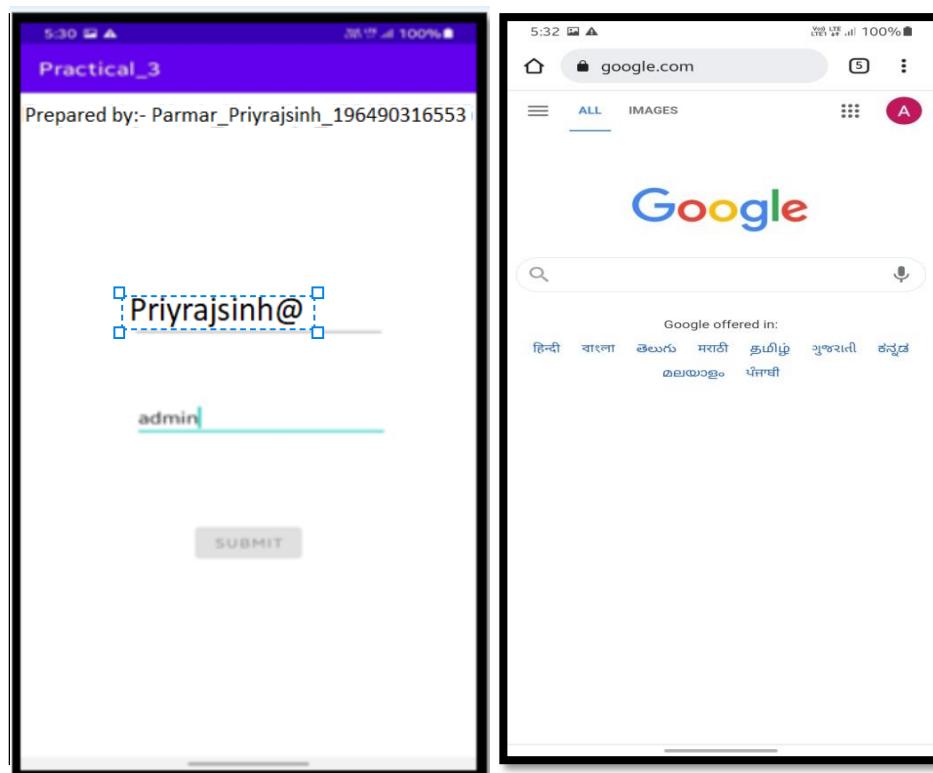
public class MainActivity extends AppCompatActivity {
    EditText etUrl;
    Button btnSearch;
    String link;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_main);
        etUrl=(EditText)findViewById(R.id.etUrl);
        btnSearch=(Button)findViewById(R.id.btnSearch);
        btnSearch.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                link=etUrl.getText().toString().toLowerCase();
                if(link.equals("google")){
                    Intent i =new Intent();
                    i.setAction(Intent.ACTION_VIEW);
                    i.setData(Uri.parse("https://www.google.com"));
                    startActivity(Intent.createChooser(i, "Open URL with
..."));
                }
                else if(link.equals("youtube")){
                    Intent i =new Intent();
```

```
i.setAction(Intent.ACTION_VIEW);
i.setData(Uri.parse("https://www.youtube.com"));
startActivity(Intent.createChooser(i, "Open URL with
..."));
}
}
});
}
}
```

- **String.xml**

```
<resources>
<string name="app_name">practical_4</string>
<string name="tv1_name">Enter URL :</string>
<string name="tv1_hint">Enter URL here...</string></resources>
```

- **Output: -**



## Practical – 5

**Aim:** Create an application to display “Hello World” string the number of times user inputs a numeric value. (Example. If user enters 5, the next screen should print “Hello World” five times.)

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_5">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_5">
        <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>
```

- **Activity\_main.xml**

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

    <EditText
```

```
        android:id="@+id/editTextNumber"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="196dp"
        android:layout_marginEnd="12dp"
        android:layout_marginRight="12dp"
        android:ems="10"      android:hint="Enter
NUmber"
        android:inputType="textPersonName"
        android:textSize="45dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

<Button
        android:id="@+id/buttonshow"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="84dp"
        android:layout_marginLeft="84dp"
        android:layout_marginTop="88dp"
        android:text="submit"      android:textSize="50dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextNumber" />

<TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="65dp"
        android:layout_marginRight="65dp"
        android:layout_marginBottom="55dp"
        android:text="Prapared by: -"
        android:text="Parmar_Priyrajsinh_196490316553"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"      tools:ignore="MissingConstraints"
/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
package com.example.pro5;
import android.app.Activity;
import android.content.Intent;
```

```
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button; import
android.widget.EditText;

public class MainActivity extends Activity implements OnClickListener {
    EditText editnum;
    Button btshow;
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_main);

        editnum=(EditText) findViewById(R.id.editTextNumber); btshow=(Button)
        findViewById(R.id.buttonshow);

        btshow.setOnClickListener(this);

    }
    @Override
    public void onClick(View v) {      //
    TODO Auto-generated method stub
    if(v.getId()==btshow.getId())
    {
        Intent myintent=new Intent(this,listActivity.class);
        myintent.putExtra("num",
        Integer.parseInt(editnum.getText().toString()));      startActivity(myintent);
    }
}
}
```

- **listActivity.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<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=".listActivity">
    <ListView
        android:id="@+id/listViewItems"
        android:layout_width="409dp"      android:layout_height="729dp"
```

```
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

- **listActivity.java**

```
package com.example.pro5;

import androidx.appcompat.app.AppCompatActivity;
import android.app.Activity; import
android.os.Bundle; import
android.view.View; import
android.widget.AdapterView; import
android.widget.ArrayAdapter; import
android.widget.ListView; import
android.widget.Toast;

public class listActivity extends Activity implements
AdapterView.OnItemClickListener {
    ListView lv;
    String items[];    int
i;    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);    setContentView(R.layout.activity_list);
        lv=(ListView) findViewById(R.id.listViewItems); int
num=getIntent().getIntExtra("num", 0); items=new String[num];
for(i=0;i<num;i++)
{
    items[i]="Hello World "+(i+1);
}
    ArrayAdapter<String> arr=new ArrayAdapter<String>(this,
    android.R.layout.simple_list_item_1,items);    lv.setAdapter(arr);

    lv.setOnItemClickListener(this);
}
@Override
    public void onItemClick(AdapterView<?> arg0, View arg1, int pos, long arg3) {
// TODO Auto-generated method stub
    Toast.makeText(this,items[pos] + " selected",
    Toast.LENGTH_SHORT).show();
}
```

- **Output: -**



## Practical – 6

**Aim:** Create spinner with strings from the resource folder (res >> value folder). On changing spinner value, change image.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_6">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_6">
        <activity
            android:name=".MainActivity"
            android:label="@string/app_name"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

- **Activity\_Main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<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/tv1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
        android:layout_centerHorizontal="true"
        android:layout_marginEnd="29dp"
        android:layout_marginRight="29dp"
        android:layout_marginBottom="16dp"
        android:text="@string/tv1Text"      android:textSize="30sp"
        android:textStyle="bold|italic"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/spinner1"
        tools:ignore="MissingConstraints" />
```

```
<Spinner
        android:id="@+id/spinner1"      android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/tv1"
        android:layout_centerHorizontal="true"
        android:layout_marginEnd="173dp"
        android:layout_marginRight="173dp"
        android:layout_marginBottom="176dp"
        app:layout_constraintBottom_toTopOf="@+id/tv1"
        app:layout_constraintEnd_toEndOf="@+id/imageView1"
        app:layout_constraintTop_toBottomOf="@+id/imageView1"
        tools:ignore="MissingConstraints" />
```

```
<ImageView
        android:id="@+id/imageView1"
        android:layout_width="0dp"      android:layout_height="0dp"
        android:layout_below="@+id/spinner1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:layout_marginBottom="59dp"
        android:src="@drawable/doraemon"
        android:visibility="visible"
        app:layout_constraintBottom_toTopOf="@+id/spinner1"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="MissingConstraints"      tools:visibility="visible" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
<?xml version="1.0" encoding="utf-8"?><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/tv1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginEnd="29dp"
        android:layout_marginRight="29dp"
        android:layout_marginBottom="16dp"
        android:text="@string/tv1Text"      android:textSize="30sp"
        android:textStyle="bold|italic"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/spinner1"
        tools:ignore="MissingConstraints" />

    <Spinner
        android:id="@+id/spinner1"      android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/tv1"
        android:layout_centerHorizontal="true"
        android:layout_marginEnd="173dp"
        android:layout_marginRight="173dp"
        android:layout_marginBottom="176dp"
        app:layout_constraintBottom_toTopOf="@+id/tv1"
        app:layout_constraintEnd_toEndOf="@+id/imageView1"
        app:layout_constraintTop_toBottomOf="@+id/imageView1"
        tools:ignore="MissingConstraints" />

    <ImageView
        android:id="@+id/imageView1"
        android:layout_width="0dp"      android:layout_height="0dp"
        android:layout_below="@+id/spinner1"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:layout_marginBottom="59dp"
        android:src="@drawable/doraemon"
        android:visibility="visible"
        app:layout_constraintBottom_toTopOf="@+id/spinner1"
        app:layout_constraintEnd_toEndOf="parent"
```

```
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="MissingConstraints"      tools:visibility="visible" />

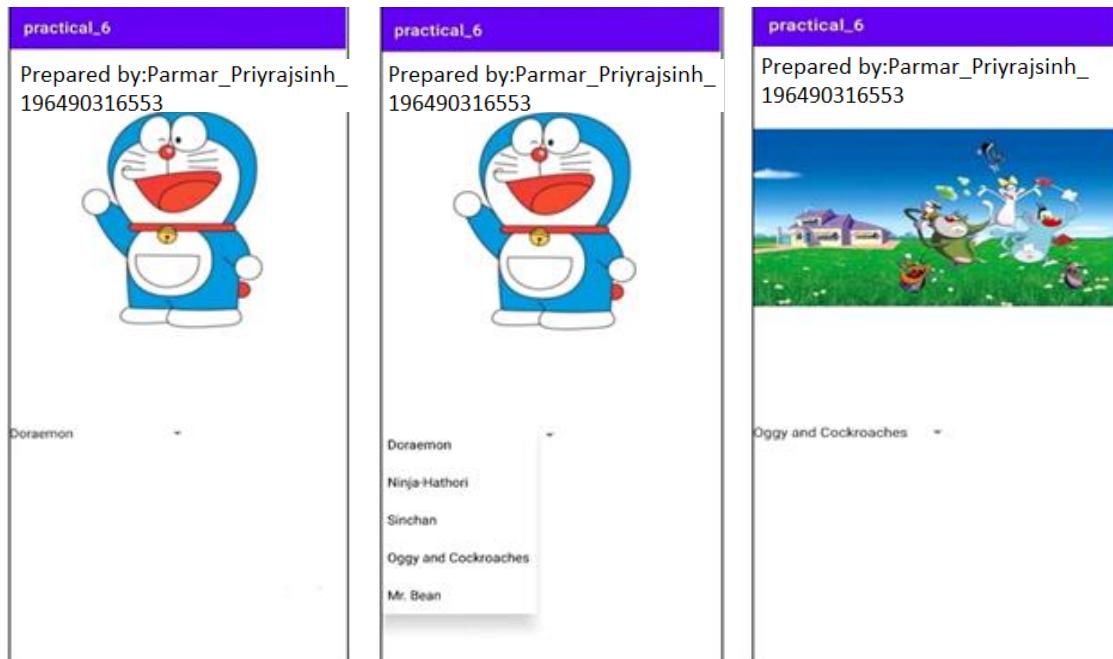
    </androidx.constraintlayout.widget.ConstraintLayout>
```

- **Strings.xml**

```
<resources>
<string name="app_name">practical_6</string>
<string name="tv1Text">Prepared by: - Parmar_Priyrajsinh_196490316553</string>

<string-array name="imgname">
<item>Doraemon</item>
<item>Doraemon-Hathori</item>
<item>Sinchan</item>
<item>Oggy and Cockroaches</item>
<item>Mr. Bean</item>
</string-array>
</resources>
```

- **Output:-**



## Practical – 7

**Aim:** Create an application to change screen color as per the user choice from a menu.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.pr_7">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Pr_7">
        <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>
```

- **Activity\_main.xml**

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

- **Main\_activity.java**

```
package com.example.pr_7;

import androidx.annotation.NonNull;
```

```
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Color;
import android.os.Bundle; import
android.view.Menu; import
android.view.MenuInflater; import
android.view.MenuItem;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_main);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.colors_demo,menu);      return true;
    }

    @Override
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        switch (item.getItemId()){      case R.id.colorRed :
            getWindow().getDecorView().setBackgroundColor(Color.RED);      }
        return super.onOptionsItemSelected(item);
    }
}
```

- **Colors\_demo.xml**

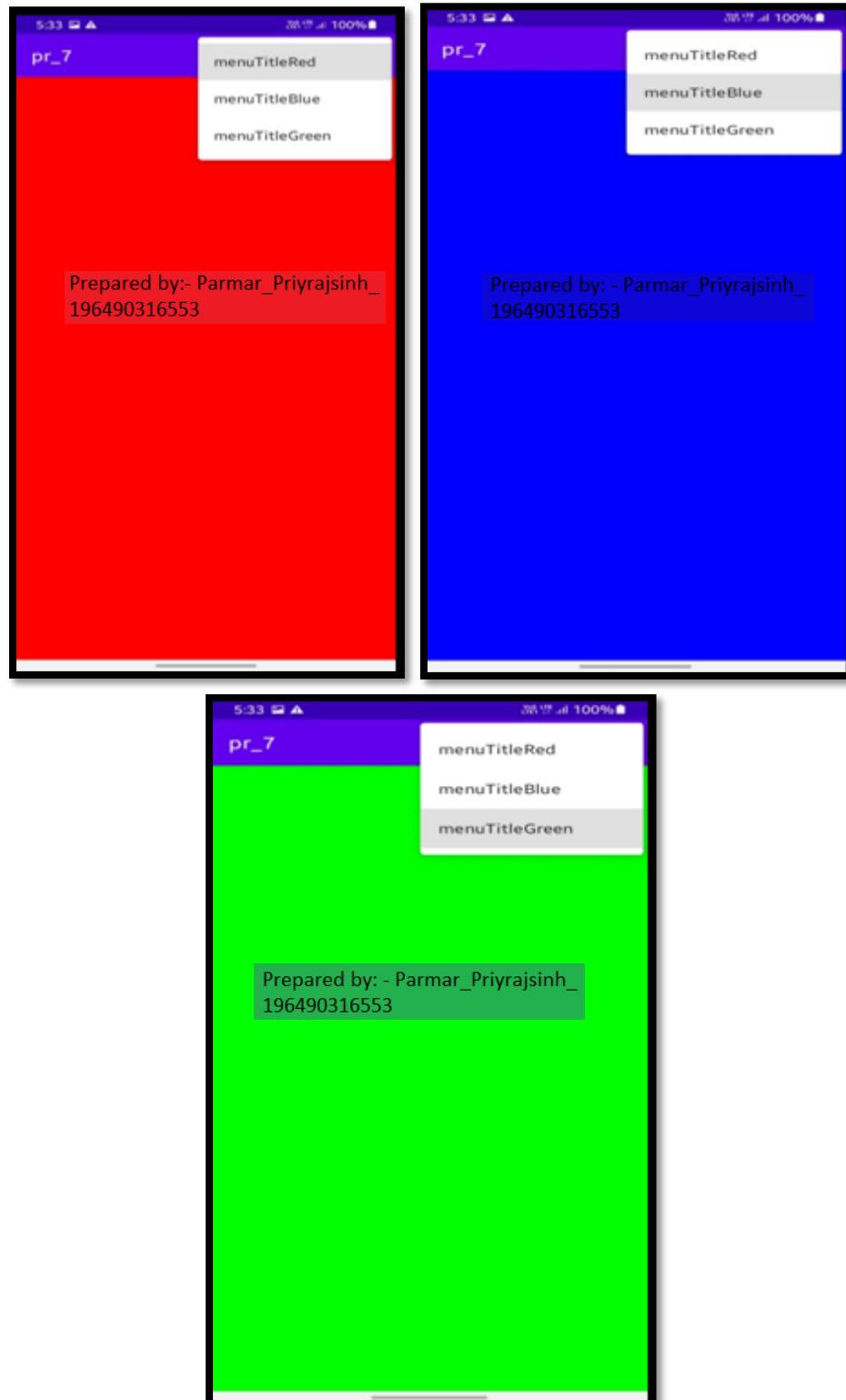
```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto">
    <item android:id="@+id/colorRed"
        android:title="@string/menuTitleRed" />

    <item android:id="@+id/colorBlue"
        android:title="@string/menuTitleBlue" />

    <item android:id="@+id/colorGreen"
        android:title="@string/menuTitleGreen" />

    <item android:id="@+id/colorBlack"
        android:title="@string/menuTitleBlack" /></menu>
```

- **Output:-**



## Practical – 8

**Aim:** Create an application that will display toast (Message) at some regular interval of time

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_8">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_8">
        <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>
```

- **Activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<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:layout_marginEnd="27dp"  
    android:layout_marginRight="27dp"  
    android:layout_marginBottom="26dp"  
    android:text="Prapared by: -  
Parmar_Priyrajsinh_196490316553  
    android:textSize="35dp"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toEndOf="parent"    tools:ignore="MissingConstraints"  
/>  
  
<Button  
    android:id="@+id/button"    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Click"    android:textSize="50dp"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toTopOf="parent"    tools:ignore="MissingConstraints"  
/>  
  
</androidx.constraintlayout.widget.ConstraintLayout>
```

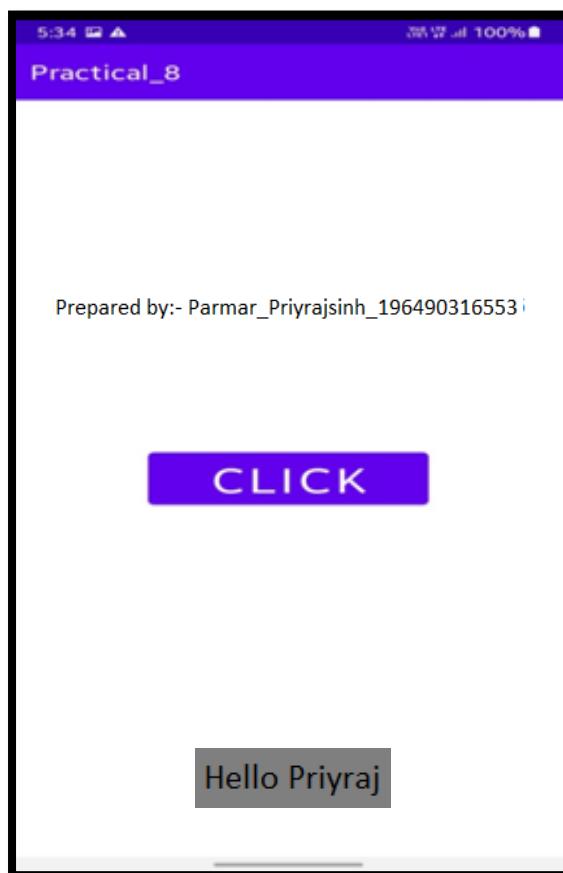
- **Mainactivity.java**

```
package com.example.practical_8;  
  
import  
    androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle; import  
    android.view.View; import android.widget.Toast;  
import  
    java.util.Random;  
  
public class MainActivity extends AppCompatActivity {  
    Random r;  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);    r=new  
        Random();
```

```
        findViewById(R.id.button).setOnClickListener(new
View.OnClickListener() {
@Override
    public void onClick(View v) {
for(int i=0; i<10;i++){
    Toast.makeText(getApplicationContext(),"Hello Prepared by: -
Parmar_Priyajsinh_196490316055",Toast.LENGTH_LONG).show();
}
})
}

}
```

- **Output:-**



## Practical – 9

**Aim:** Create a background application that will open activity on specific time.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_9">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_9">
        <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>
```

- **Activity\_main.xml**

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

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="266dp"
        android:text="Service"      android:textSize="40dp"
            app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="33dp"
        android:layout_marginLeft="33dp"
        android:layout_marginTop="68dp"
        android:text="Next"      android:textSize="40dp"
            app:layout_constraintStart_toStartOf="@+id/button1"
        app:layout_constraintTop_toBottomOf="@+id/button1"
        tools:ignore="MissingConstraints" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="69dp"
        android:layout_marginRight="69dp"
        android:layout_marginBottom="52dp"
        android:text="Prapared by: -"
        Parmar_Priyrajsinh_196490316553"
        android:textSize="30dp"
            app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"      tools:ignore="MissingConstraints"
    /></androidx.constraintlayout.widget.ConstraintLayout>
```

- **Activity\_second.xml**

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

    <TextView
```

```
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="321dp"      android:text="Second
Page"      android:textSize="40dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    /></androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
package com.example.practical_9;

import
androidx.appcompat.app.AppCompatActivity;
import android.app.Activity; import
android.content.Intent; import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener; import
android.widget.Button;
public class MainActivity extends AppCompatActivity {
    Button start,stop;  @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_main);
        start=(Button)findViewById(R.id.button1);
        stop=(Button)findViewById(R.id.button2);
        start.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View vi) {
                Intent i = new Intent(vi.getContext(), service.class);
                startActivityForResult(i, 0);
            }
        });
        stop.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View vi) {
                Intent i = new Intent(vi.getContext(), second.class);
                startActivityForResult(i, 0);
            }
        });
    }
}
```

- **Secondactivity.java**

```
package com.example.practical_9;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class second extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_second);
    }
}
```

- **Service.java**

```
package com.example.practical_9;
import android.app.Service; import
android.content.Intent; import
android.os.IBinder; import
android.widget.SlidingDrawer; import
android.widget.Toast;

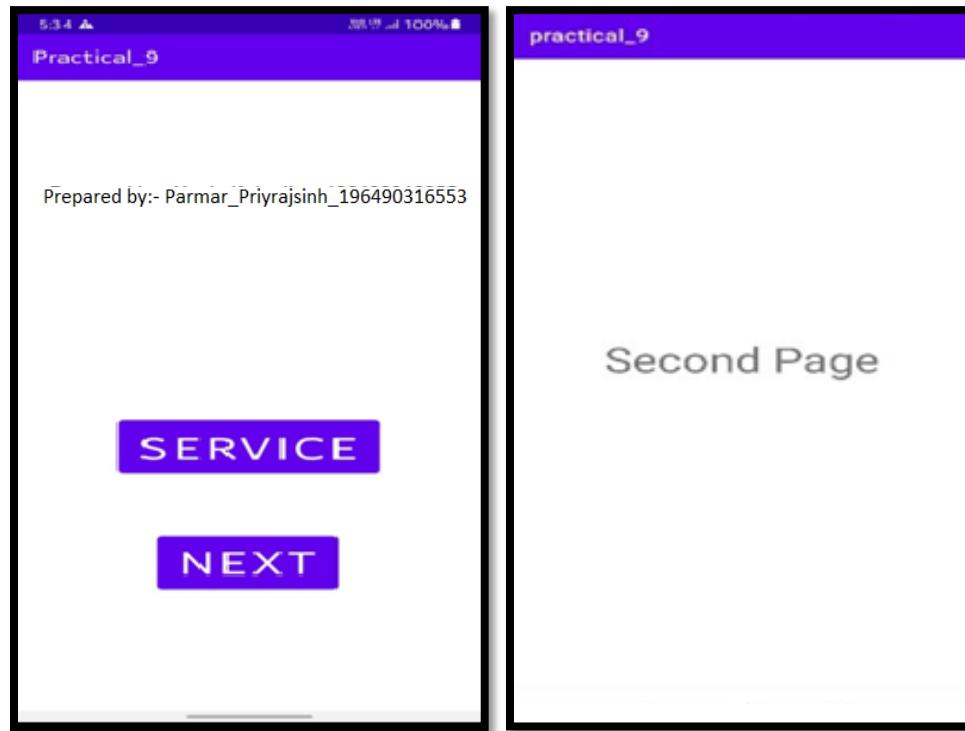
public class service extends Service{

    @Override
    public IBinder onBind(Intent intent) {      return
null;
    }
    public void onCreate()
    {

        Toast.makeText(this, "My Service Started", Toast.LENGTH_LONG).show();
    }
    public void onDestroy()
    {
        Toast.makeText(this, "My Service Stopped", Toast.LENGTH_LONG).show();    }
    public void onStart(Intent intent, int startid)
    {
        Intent dialogIntent = new Intent(getApplicationContext(), second.class);
        dialogIntent.addFlags(Intent.FLAG_ACTIVITY_NEW_TASK);
        getApplication().startActivity(dialogIntent);
    }
}
```

```
    }  
}
```

- **Output: -**



## Practical – 10

**Aim:** Create an application that will have spinner with list of animation names. On selecting animation name, that animation should effect on the images displayed below.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_10">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_10">
        <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>
```

- **Activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<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:layout_marginEnd="60dp"
        android:layout_marginRight="60dp"
        android:layout_marginBottom="63dp"
        android:text="Prepared by: -
        Parmar_Priyrajsinh_196490316553"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"    tools:ignore="MissingConstraints"
    />

    <Spinner
        android:id="@+id/spin"      android:layout_width="match_parent"
        android:layout_height="wrap_content"
        tools:ignore="MissingConstraints"
        tools:layout_editor_absoluteX="46dp"
        tools:layout_editor_absoluteY="103dp" />

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/doraemon"
        tools:layout_editor_absoluteX="51dp"
        tools:layout_editor_absoluteY="217dp"
        tools:ignore="MissingConstraints" />

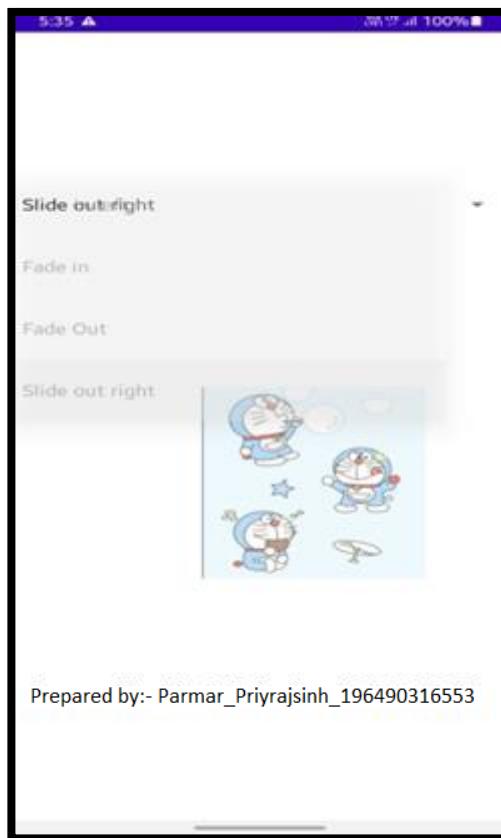
</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
package com.example.practical_10;
import android.app.Activity;
import android.os.Bundle; import
android.view.*; import
android.view.animation.*; import
android.widget.*;
import android.widget.AdapterView.OnItemSelectedListener;
public class MainActivity extends Activity implements OnItemSelectedListener{
    Spinner spin;
    ImageView img;
    String array[]={"Slide in left","Fade in","Fade Out","Slide out right"};    protected
    void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_main);
```

```
spin = (Spinner)findViewById(R.id.spin);      img =
(ImageView)findViewById(R.id.imageView);
spin.setOnItemSelectedListener(this);
    ArrayAdapter<String> adapter = new
ArrayAdapter<String>(getApplicationContext(),android.R.layout.simple_dropdown_
item_1line,array);
    spin.setAdapter(adapter);
}
public void onItemSelected(AdapterView<?> arg0, View arg1, int arg2,
        long arg3) {
    Animation anim=
AnimationUtils.loadAnimation(getApplicationContext(),android.R.anim.slide_in_left);
    if(spin.getSelectedItem().toString().equals("Slide in left"))
    {
        anim =
AnimationUtils.loadAnimation(getApplicationContext(),android.R.anim.slide_in_left);
    }
    else if(spin.getSelectedItem().toString().equals("Fade in"))
    {
        anim =
AnimationUtils.loadAnimation(getApplicationContext(),android.R.anim.fade_in);
    }
    else if(spin.getSelectedItem().toString().equals("Fade Out"))
    {
        anim =
AnimationUtils.loadAnimation(getApplicationContext(),android.R.anim.fade_out);
    }
    else if(spin.getSelectedItem().toString().equals("Slide out right"))
    {
        anim =
AnimationUtils.loadAnimation(getApplicationContext(),android.R.anim.slide_out_
right);
    }
    img.startAnimation(anim);
}
public void onNothingSelected(AdapterView<?> arg0) {
}
```

- **Output:** -



## Practical - 11

**Aim:** Create an UI listing the diploma engineering branches. If user selects a branch name, display the number of semesters and subjects in each semester

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_11">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_11">
        <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>
```

- **Activity\_main.xml**

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

    <Spinner
        android:id="@+id/spinner1"      android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="103dp"
```

```
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    tools:ignore="MissingConstraints" />

<Spinner
        android:id="@+id/spinner2"      android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_marginBottom="246dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        tools:ignore="MissingConstraints" />

<TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="30dp"
        android:layout_marginRight="30dp"
        android:layout_marginBottom="37dp"
        android:text="Prapared by: -"
        android:textSize="45dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"      tools:ignore="MissingConstraints"
/>

</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
package com.example.practical_11;
import android.app.Activity; import
android.os.Bundle; import
android.view.Menu; import
android.view.MenuItem; import
android.view.View; import
android.widget.AdapterView;
import android.widget.AdapterView.OnItemSelectedListener;
import android.widget.ArrayAdapter; import
android.widget.Spinner; import android.widget.Toast;

public class MainActivity extends Activity implements OnItemSelectedListener {
    Spinner sp1;
    Spinner sp2;
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        sp1 = (Spinner) findViewById(R.id.spinner1);
        sp2 = (Spinner) findViewById(R.id.spinner2);
        String s[] = new String[]{"IT", "Computer", "Civil"};

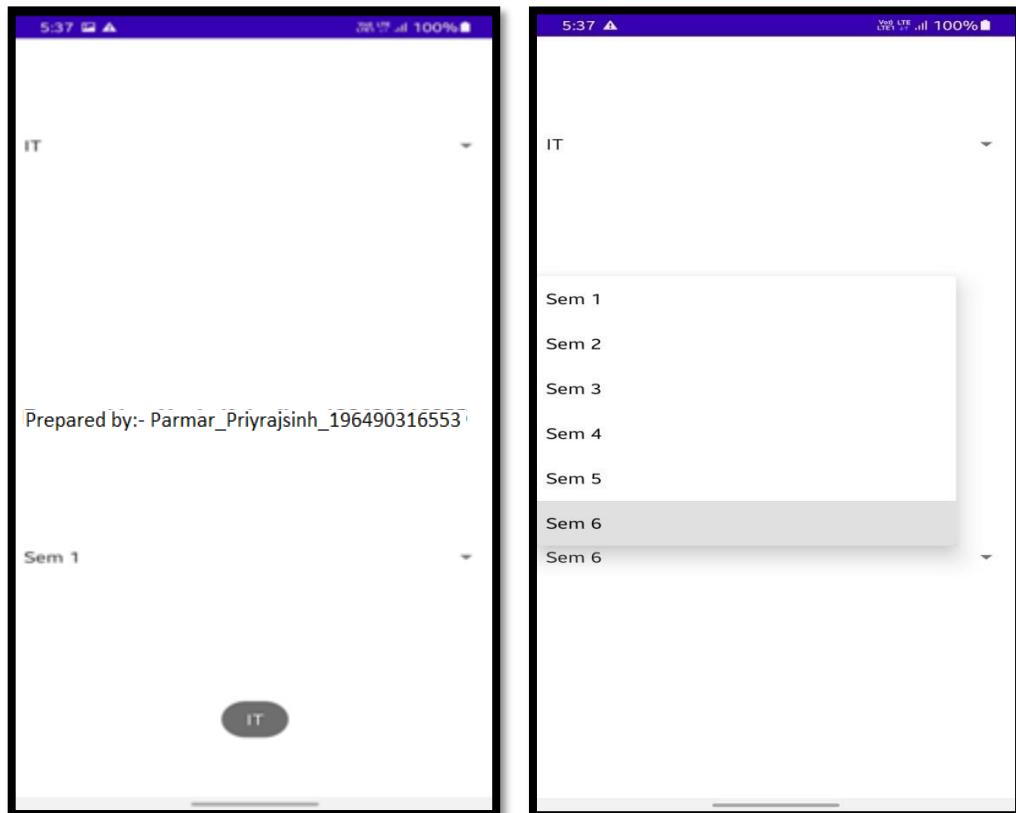
        ArrayAdapter aa = new ArrayAdapter(this, android.R.layout.simple_spinner_item,
                s);

        aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        sp1.setAdapter(aa);
        sp1.setOnItemSelectedListener(this);
    }

    @Override
    public void onItemSelected(AdapterView<?> arg0, View arg1, int pos, long
            arg3) {
        // TODO Auto-generated method stub
        String s = (String) sp1.getItemAtPosition(pos);
        //Toast.makeText(this, s, Toast.LENGTH_LONG).show();
        if (s.equalsIgnoreCase("IT")) {
            Toast.makeText(this, "IT", Toast.LENGTH_LONG).show();
            String city[] = new String[]{"Sem 1", "Sem 2", "Sem 3", "Sem 4", "Sem
5", "Sem 6"};
            ArrayAdapter bb = new ArrayAdapter(this,
                    android.R.layout.simple_spinner_item, city);

            bb.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
            sp2.setAdapter(bb);
        }
        if (s.equals("Computer")) {
            Toast.makeText(this, "Computer", Toast.LENGTH_LONG).show();
            String city[] = new String[]{"Sem 1", "Sem 2", "Sem 3", "Sem 4",
"Sem 5"};
            ArrayAdapter bb = new ArrayAdapter(this,
                    android.R.layout.simple_spinner_item, city);
            bb.setDropDownViewResource(android.R.layout.simple
_spinner_dropdown_item);          sp2.setAdapter(bb);
        }
        if (s.equals("Civil")) {
            Toast.makeText(this, "Civil", Toast.LENGTH_LONG).show();
            String city[] = new String[]{"Sem 1", "Sem 2", "Sem 3", "Sem 4",
```

```
"Sem 5", "Sem 6 "};  
        ArrayAdapter bb = new ArrayAdapter(this,  
                android.R.layout.simple_spinner_item, city);  
  
        bb.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);  
        sp2.setAdapter(bb);  
    }  
}  
  
@Override  
public void onNothingSelected(AdapterView<?> parent) {  
  
}  
}  
• Output: -
```



## Practical – 12

**Aim:** Use content providers and permissions by implementing read phonebook contacts with content providers and display in the list.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_12">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_12">
        <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>
```

- **Activity\_main.xml**

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

    <ListView
        android:layout_width="409dp"
        android:layout_height="729dp"      android:id="@+id/listview1"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

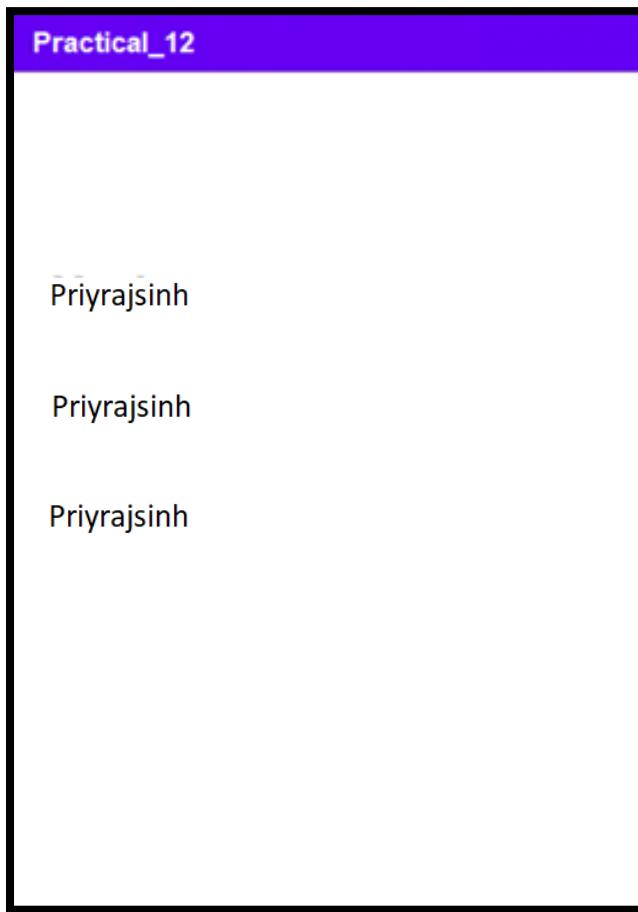
```
package com.example.practical_12;
import android.app.Activity; import
android.database.Cursor; import
android.net.Uri; import android.os.Bundle;
import android.provider.Contacts; import
android.widget.ArrayAdapter; import
android.widget.ListView; public class
MainActivity extends Activity {
    int i=0;    ListView
    mylist;    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);      setContentView(R.layout.activity_main);

        mylist=(ListView) findViewById(R.id.listview1);

        Uri u=Uri.parse("content://contacts/people");
//Uri u1= Contacts.Phones.CONTENT_URI;
        Cursor cur=managedQuery(u, null,null,null,null);
        String names[]=new String[cur.getCount()];

        while(cur.moveToNext())
        {
            names[i++]=cur.getString(15)+"nttt"+cur.getString(7);      }
        ArrayAdapter<String> aa=new ArrayAdapter<String>(this,
        android.R.layout.simple_list_item_1,names);      mylist.setAdapter(aa);
    }
}
```

- **Output: -**



## Practical – 13

**Aim:** Create an application to call a phone number entered by the user the Edit Text.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_13">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_13">
        <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>
```

- **Activity\_main.xml**

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

```
<EditText
    android:id="@+id/edittext"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
```

```
        android:layout_marginTop="196dp"
        android:layout_marginEnd="26dp"
        android:layout_marginRight="26dp"      android:hint="Enter
Number:-"      android:inputType="textPersonName"
        android:textSize="45dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    />

<Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="76dp"      android:text="click to
call"      app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/edittext"
        tools:ignore="MissingConstraints" />

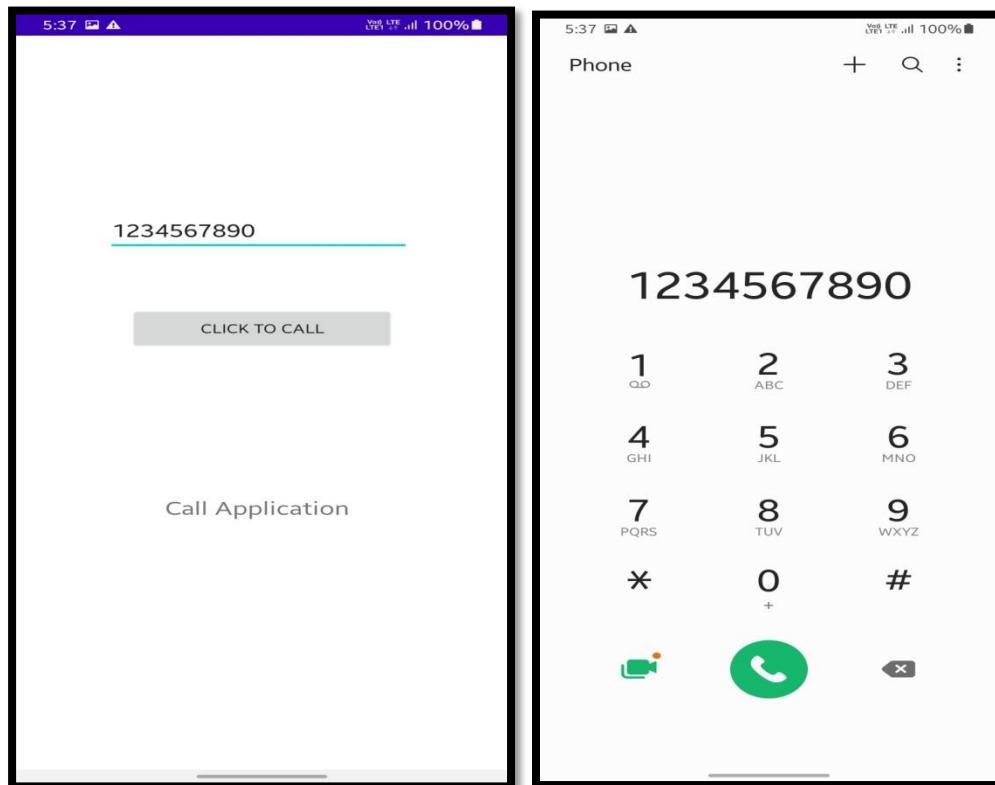
<TextView
        android:id="@+id/textview"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginBottom="150dp"      android:ems="10"
        android:inputType="textPersonName"      android:text="Call
Application"      android:textSize="45dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
    /></androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
package com.example.practical1_13;
import android.app.Activity;
import android.content.Intent;
import android.net.Uri; import
android.os.Bundle; import
android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button; import
android.widget.EditText;
public class MainActivity extends Activity implements OnClickListener {
    EditText num;
    Button dial;
    @Override
```

```
public void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);      num=(EditText)  
    findViewById(R.id.edittext);      dial=(Button)  
    findViewById(R.id.button);  
  
    dial.setOnClickListener(this);  
}  
@Override  
public void onClick(View v) { //  
    TODO Auto-generated method stub  
    if(v.getId()==dial.getId())  
    {  
  
        Intent myintent=newIntent(Intent.ACTION_DIAL,  
        Uri.parse("tel:"+num.getText()));  
        startActivity(myintent);  
    }  
}  
}
```

- **Output:** -



## Practical – 14

**Aim:** Create an application that will create database to store username and password.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_14">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_14">
        <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>
```

- **Activity\_Main.xml**

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

    <EditText
```

```
        android:id="@+id/number"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="215dp"
        android:ems="10"      android:hint="Enter
User Name"
        android:inputType="textPersonName"
        android:textSize="40dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    />

<EditText
        android:id="@+id/name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="49dp"
        android:ems="10"      android:hint="Enter
Password"
        android:inputType="numberPassword"
        android:textSize="40dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/number"
        tools:ignore="MissingConstraints" />

<Button
        android:id="@+id/submit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="161dp"
        android:text="Submit"      android:textSize="50dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
    /></androidx.constraintlayout.widget.ConstraintLayout>
```

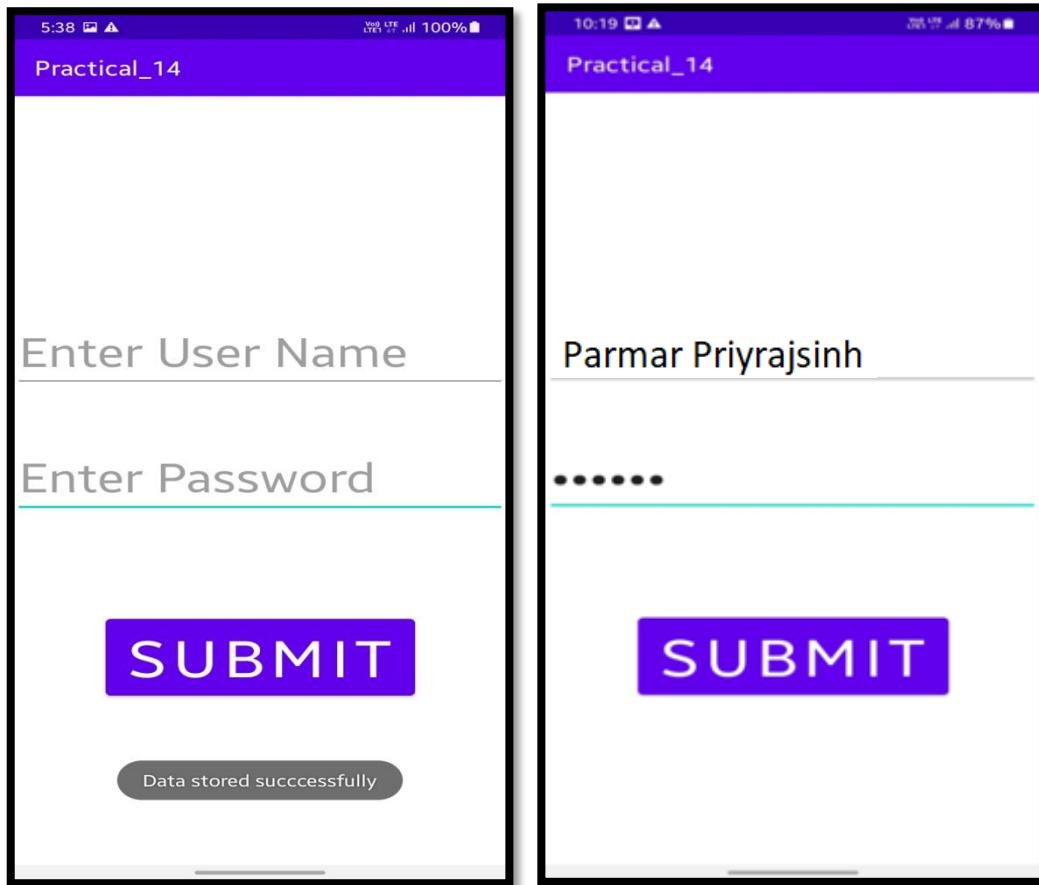
- **Mainactivity.java**

Package com.example.practical\_14  
import androidx.appcompat.app.AppCompatActivity; import  
android.content.Context;  
import android.database.sqlite.SQLiteDatabase;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText; i  
mport android.widget.Toast;

```
public class MainActivity extends AppCompatActivity {
    EditText e1,e2;
    Button b;
    SQLiteDatabase sqliteobj;
    String str1,str2,sqlitequery;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);      e1 =
        findViewById(R.id.number);      e2 =
        findViewById(R.id.name);      b =
        findViewById(R.id.submit);
        b.setOnClickListener(new View.OnClickListener() {
    @Override
        public void onClick(View v) {
            SQLiteDataBaseBuild();
            SQLiteTableBuild();
            Checktext();
            InsertDataIntoSQLiteDatabase();
            EmptyEditTExt();
        }
    });
    public void SQLiteDataBaseBuild()
    {
        sqliteobj = openOrCreateDatabase("db1", Context.MODE_PRIVATE,null);
    }
    public void SQLiteTableBuild()
    {
        sqliteobj.execSQL("Create Table If not Exists login(UserName TEXT
Primary key not null,Password INTEGER not null)");
    }
    public void Checktext()
    {
        str1 = e1.getText().toString();      str2 =
        e2.getText().toString();
    }
    public void InsertDataIntoSQLiteDatabase()
    {
        sqlitequery="Insert Into
login(UserName,Password)Values("+str1+",""+str2+");";
        sqliteobj.execSQL(sqlitequery);      sqliteobj.close();
        Toast.makeText(this, "Data stored successfully",
        Toast.LENGTH_SHORT).show();
    }
}
```

```
public void EmptyEditTExt()
{
    e1.getText().clear();      e2.getText().clear();
}
}
```

- **Output:** -



## Practical – 15

**Aim:** Create an application to insert, update and delete a record from the database.

**Ans:**

- **Android Manifest File:** -

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.practical_15">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical_15">
        <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>
```

- **Activity\_Main.xml**

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

    <EditText
        android:id="@+id/editText_name"
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:layout_marginStart="30dp"
        android:layout_marginLeft="30dp"
        android:layout_marginTop="140dp"
        android:ems="10"      android:hint="Enter
Name"
        android:inputType="textPersonName"
        android:textSize="30dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"      tools:ignore="MissingConstraints"
    />

<EditText
        android:id="@+id/editText_surname"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="30dp"
        android:layout_marginLeft="30dp"
        android:layout_marginTop="19dp"
        android:ems="10"      android:hint="Enter
Surname"
        android:inputType="textPersonName"
        android:textSize="30dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editText_name"
        tools:ignore="MissingConstraints" />

<EditText
        android:id="@+id/editText_marks"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="30dp"
        android:layout_marginLeft="30dp"
        android:layout_marginTop="21dp"
        android:ems="10"      android:hint="Enter
Marks"
        android:inputType="textPersonName"
        android:textSize="30dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/
editText_surname"
        tools:ignore="MissingConstraints" />

<EditText
        android:id="@+id/editText_id"
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:layout_marginStart="30dp"
        android:layout_marginLeft="30dp"
        android:layout_marginTop="19dp"
        android:ems="10"      android:hint="Enter ID"
        android:inputType="textPersonName"
        android:textSize="30dp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editText_marks"
        tools:ignore="MissingConstraints" />
<Button
        android:id="@+id/button_add"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="14dp"
        android:layout_marginRight="14dp"
        android:layout_marginBottom="27dp"
        android:text="Add"      android:textSize="35dp"
        app:layout_constraintBottom_toTopOf="@+id/button_update"
        app:layout_constraintEnd_toEndOf="@+id/button_update"
        tools:ignore="MissingConstraints" />
<Button
        android:id="@+id/button_viewall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="27dp"
        android:text="View"      android:textSize="35dp"
        app:layout_constraintBottom_toTopOf="@+id/button_delete"
        app:layout_constraintStart_toStartOf="@+id/button_delete"
        tools:ignore="MissingConstraints" />
<Button
        android:id="@+id/button_update"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginBottom="75dp"
        android:text="Update"      android:textSize="35dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"      tools:ignore="MissingConstraints"
/>
<Button
        android:id="@+id/button_delete"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="44dp"
```

```
        android:layout_marginLeft="44dp"
        android:text="Delete"      android:textSize="35dp"
        app:layout_constraintBottom_toBottomOf="@+id/button_update"
        app:layout_constraintStart_toEndOf="@+id/button_update"
        app:layout_constraintTop_toTopOf="@+id/button_update"
        tools:ignore="MissingConstraints" />

    </androidx.constraintlayout.widget.ConstraintLayout>
```

- **Mainactivity.java**

```
package com.example.db3;
import android.database.Cursor;
import android.os.Bundle;
import androidx.appcompat.app.AlertDialog; import
androidx.appcompat.app.AppCompatActivity;
import android.view.View;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    DatabaseHelper db;
    EditText editname, editsurname, editid, editmarks;
    Button btnadd, btnview, btnupdate, btndelete;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);      db = new
DatabaseHelper(this);      editname =
findViewById(R.id.editText_name);      editid =
findViewById(R.id.editText_id);      editmarks =
findViewById(R.id.editText_marks);      editsurname =
findViewById(R.id.editText_surname);      btnadd =
findViewById(R.id.button_add);      btndelete =
findViewById(R.id.button_delete);      btnupdate =
findViewById(R.id.button_update);      btnview =
findViewById(R.id.button_viewall);

        Adddata();
        Viewalldata();
        Updatedata();
        Deletedata();
    }
}
```

```
public void Deletedata() {
    btndelete.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Integer deleterows =
                db.Deletedata(editid.getText().toString());
            if (deleterows > 0) {
                Toast.makeText(MainActivity.this, "Data Deleted",
                    Toast.LENGTH_SHORT).show();
            } else {
                Toast.makeText(MainActivity.this, "Data Not Deleted",
                    Toast.LENGTH_SHORT).show();
            }
        }
    });
}

public void Updatedata() {
    btnupdate.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            boolean isupdate = db.Updatedata(editid.getText().toString(),
                editname.getText().toString(), editsurname.getText().toString(),
                editmarks.getText().toString());           if (isupdate == true) {
                Toast.makeText(MainActivity.this, "Data Updated",
                    Toast.LENGTH_SHORT).show();
            } else {
                Toast.makeText(MainActivity.this, "Data Not Updated",
                    Toast.LENGTH_SHORT).show();
            }
        }
    });
}

public void Adddata() {
    btnadd.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            boolean isinserted =
                db.Insertdata(editname.getText().toString(), editsurname.getText().toString(),
                editmarks.getText().toString());           if (isinserted == true) {
                Toast.makeText(MainActivity.this, "Data Inserted",
                    Toast.LENGTH_SHORT).show();
            } else {
                Toast.makeText(MainActivity.this, "Data Not Inserted",
                    Toast.LENGTH_SHORT).show();
            }
        }
    });
}
```

```

    });
}
public void Viewalldata() {
    btnview.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Cursor res = db.getAllData();           if
(res.getCount() == 0) {
                showMessage("error", "nothing to display");
return;           } else {
                while (res.moveToNext()) {
                    StringBuffer buffer = new StringBuffer();
buffer.append("ID:" + res.getString(0) + "\n");           buffer.append("NAME:"
+ res.getString(0) + "\n");           buffer.append("SURNAME:" +
res.getString(0) + "\n");           buffer.append("MARKS" + res.getString(0) +
"\n");           showMessage("data", buffer.toString());
                }
            }
        }
    });
}

```

- **DatabaseHelper.java**

```

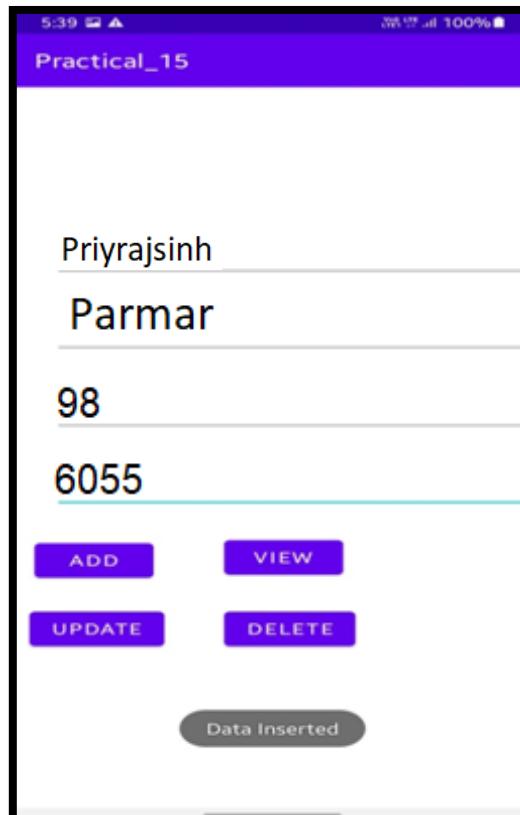
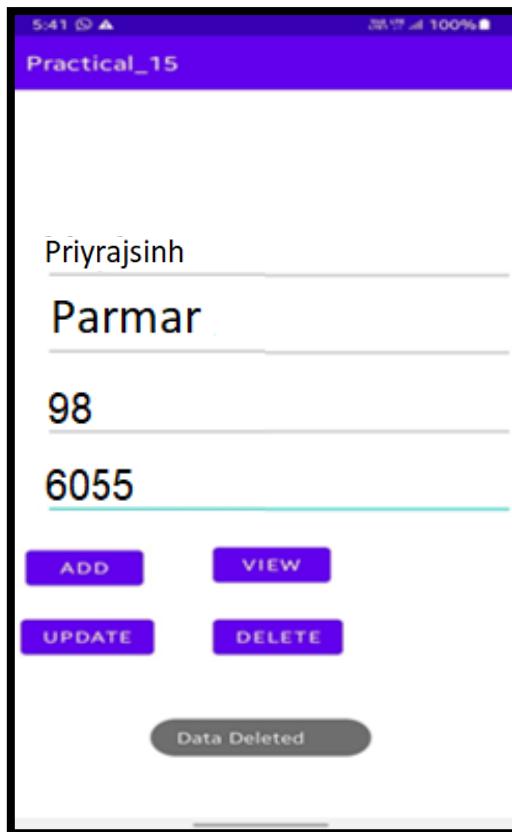
package com.example.db3;
import android.content.ContentValues;
import android.content.ContentValues;
import android.content.Context; import
android.database.Cursor;
import android.database.sqlite.SQLiteDatabase; import
android.database.sqlite.SQLiteOpenHelper;
public class DatabaseHelper extends SQLiteOpenHelper {
    public static String database_name = "employee.db";   public
static final String table_name = "employee_table";   public static
final String col_1 = "ID";   public static final String col_2 =
"NAME";   public static final String col_3 = "SURNAME";
    public static final String col_4 = "MARKS";   public static final
int Version_name = 1;   public DatabaseHelper(Context c)
{
    super(c,database_name,null,Version_name);
}

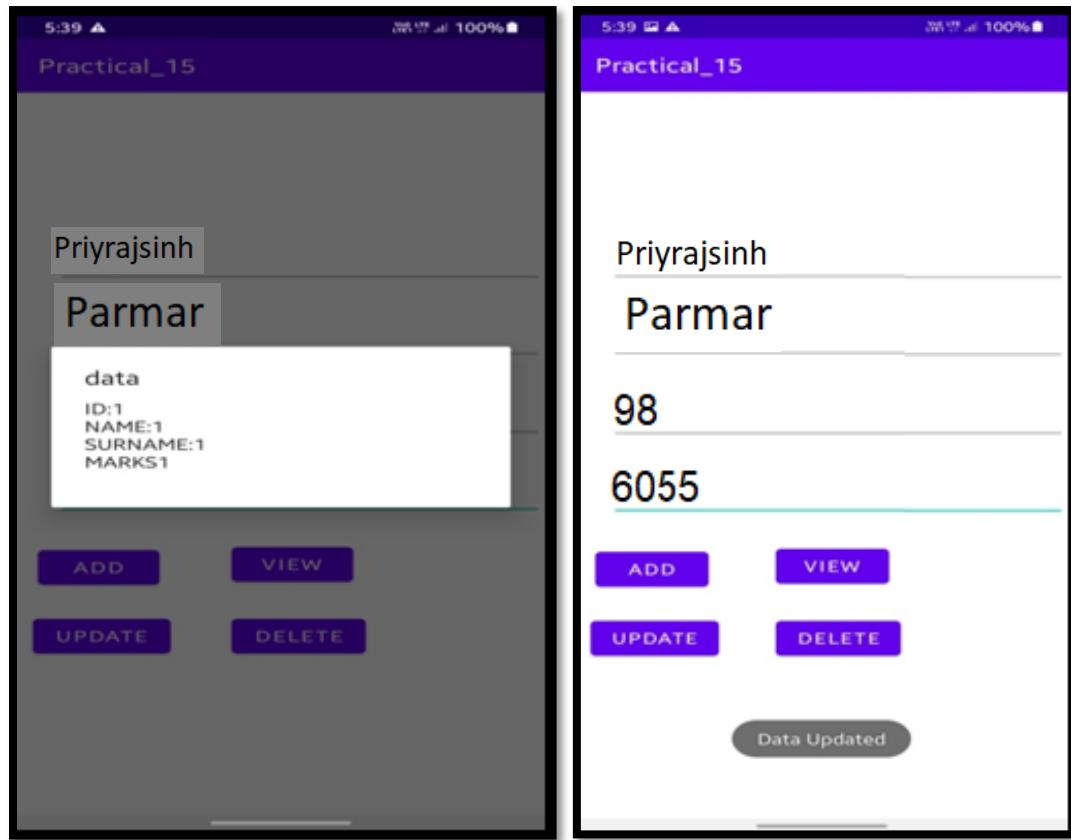
```

```
}

@Override
public void onCreate(SQLiteDatabase db) {
    db.execSQL("create table "+table_name+"(ID INTEGER PRIMARY KEY
    AUTOINCREMENT,NAME TEXT NOT NULL,SURNAME TEXT,MARKS
    INTEGER)");
}
public void onUpgrade(SQLiteDatabase db,int oldversion,int newversion)
{
    db.execSQL("Drop table if EXISTS "+table_name);      onCreate(db);
}
public boolean Insertdata(String name,String surname,String marks)
{
    SQLiteDatabase db = this.getWritableDatabase();      ContentValues
    contentValues = new ContentValues();      contentValues.put(col_2,name);
    contentValues.put(col_3,surname);      contentValues.put(col_4,marks);
    long result = db.insert(table_name,null,contentValues);      if(result== -1)
    {
        return false;
    }
    else
    {
        return true;
    }
}
public Cursor getAllData()
{
    SQLiteDatabase db = this.getWritableDatabase();
    Cursor res = db.rawQuery("select * from "+table_name,null);      return res;
}
public boolean Updatedata(String id,String name,String surname,String marks)
{
    SQLiteDatabase db = this.getWritableDatabase();
    ContentValues contentValues = new ContentValues();
    contentValues.put(col_1,id);      contentValues.put(col_2,name);
    contentValues.put(col_3,surname);      contentValues.put(col_4,marks);
    db.update(table_name,contentValues,"ID=?",new String[]{id});      return
true;
}
public Integer Deletedata(String id)
{
    SQLiteDatabase db = this.getWritableDatabase();      return
db.delete(table_name,"ID=?",new String[]{id});
}
```

- **Output: -**





Sign:-  
Date:-