Objective of Practical-1

Create "Hello World" application that will display "Hello World" in the middle of the screen in the emulator. Also display "Hello World" in the middle of the screen in the android phone.

Code:

```
activity main.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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/hello"
android: layout_width="240dp"
android:layout_height="220dp"
android:gravity="center"
android:text="Hello World"
android:textSize="40dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_1;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class MainActivity extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
```



Objective of Practical-2 Create an application to display various android activity lifecycle phases.

Code:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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:layout_width="362dp"
android:layout_height="138dp"
android:text="Activity Life Cycle"
android:gravity="center"
android:textSize="50dp"
android:fontFamily="cursive"
android:textStyle="bold|italic"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.091" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_2;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.os.Bundle;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
}
@Override
protected void onStart() {
super.onStart();
Toast.makeText(MainActivity.this, "Application
Started", Toast.LENGTH_SHORT).show();
@Override
protected void onStop() {
super.onStop();
Toast.makeText(MainActivity.this,"Application
Stopped", Toast.LENGTH_SHORT).show();
@Override
protected void onRestart() {
super.onRestart();
Toast.makeText(MainActivity.this,"Application
Restarted", Toast.LENGTH_SHORT).show();
ን
@Override
protected void onPause() {
super.onPause();
Toast.makeText(MainActivity.this,"Application
Paused", Toast. LENGTH_SHORT). show();
}
@Override
protected void onResume() {
super.onResume();
Toast.makeText(MainActivity.this,"Application
Resumed", Toast.LENGTH_SHORT).show();
}
```





Objective of Practical-3

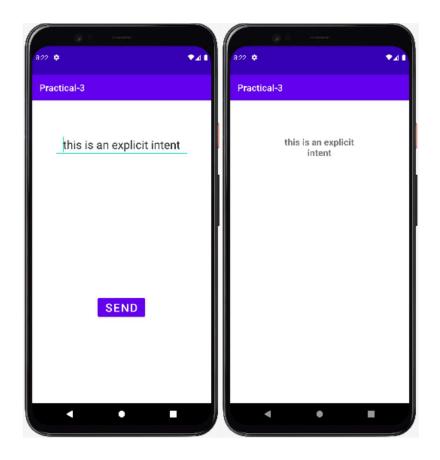
Create an application with first activity with an editText and send button. On click of send button, make use of explicit intent to send text to second activity and display there in text view.

Code:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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/message"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
tools:layout_editor_absoluteX="100dp"
tools:layout_editor_absoluteY="223dp"
```

```
android:text="Name"
android:gravity="center"
android:textSize="25dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.497"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:lavout constraintVertical bias="0.115"/>
<Button
android:id="@+id/send"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Send"
android:gravity="center"
android:textSize="25dp"
app:layout_constraintBottom_toBottomOf="parent"
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="0.7"
/>
</androidx.constraintlayout.widget.ConstraintLayout>
activity_main2.xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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=".MainActivity2">
<TextView
android:id="@+id/textView"
android: layout_width="156dp"
android:layout_height="73dp"
android:gravity="center"
android:textSize="20sp"
android:textStyle="bold"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.498"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.112" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.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 MainActivity extends AppCompatActivity {
Button send:
EditText message:
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
message=findViewById(R.id.message);
send=findViewById(R.id.send);
send.setOnClickListener(new View.OnClickListener(){
@Override
public void onClick(View view) {
Intent i=new Intent(MainActivity.this, MainActivity2.class);
String st=message.getText().toString();
i.putExtra("Value",st);
startActivity(i);
finish();
});
MainActivity2.java
package com.practical_3;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
public class MainActivity2 extends AppCompatActivity {
TextView tt:
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main2);
tt=findViewById(R.id.textView);
tt.setText(getIntent().getStringExtra("Value").toString());
}
Output:
```



Objective of Practical-4:

Create an application with first activity with an editText and send. On click of send button, make use of implicit intent that uses a SEND ACTION and let user select app from app chooser and navigate to that application.

Code:

activity_main.xml

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

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

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">

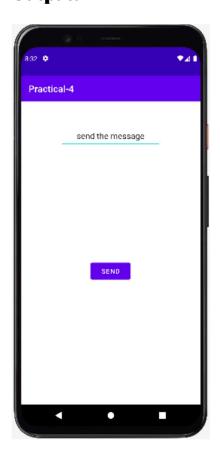
<EditText

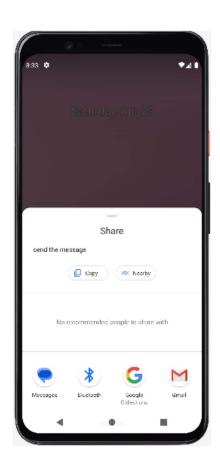
android:id="@+id/message"
android:layout_width="220dp"
android:layout_height="50dp"
android:hint="Enter the Message"

android:ems="10"

android:inputType="textPersonName"

```
android:text=""
android:gravity="center"
app:layout_constraintBottom_toBottomOf="parent"
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="0.083" />
<Button
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Send"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.498"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.565" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_4;
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 message;
Button send;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
message=findViewById(R.id.message);
send=findViewById(R.id.button);
send.setOnClickListener(new View.OnClickListener(){
@Override
public void onClick(View view)
String st=message.getText().toString();
Intent i=new Intent(Intent.ACTION_SEND);
i.setType("text/plain");
i.putExtra(Intent.EXTRA_TEXT.st);
startActivity(Intent.createChooser(i, "Send"));
finish();
});
```







Objective of Practicacl-5:

Create spinner with strings taken from resource folder (res >> value folder) and on changing the spinner value, Image will change.

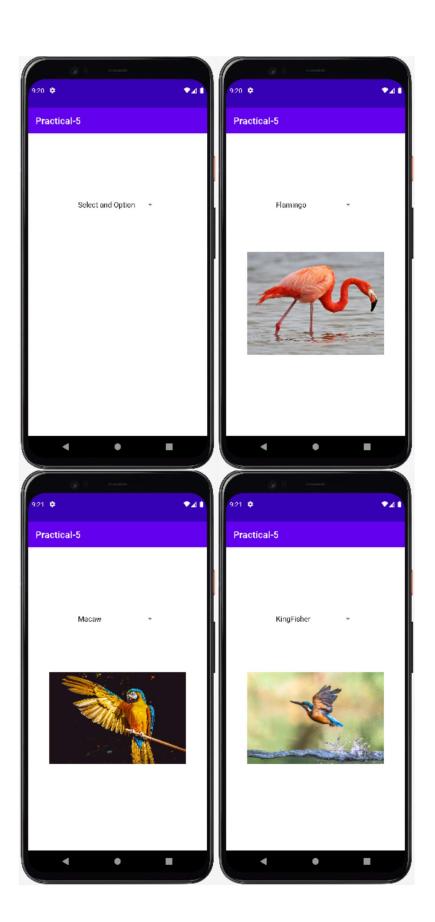
Code:

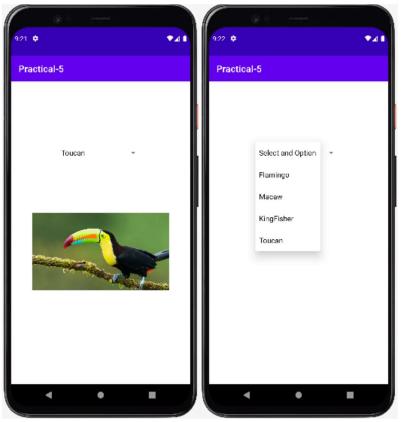
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">
<Spinner
android:id="@+id/spinner"
android:layout_width="190dp"
android:layout_height="wrap_content"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintVertical_bias="0.215"
```

```
/>
<ImageView</pre>
android:id="@+id/image"
android:lavout width="300dp"
android:layout_height="300dp"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintVertical_bias="0.615"/>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.Spinner;
public class MainActivity extends AppCompatActivity {
Spinner sp;
ImageView image;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
sp=findViewById(R.id.spinner);
image=findViewById(R.id.image);
String []birds={"Select and
Option", "Flamingo", "Macaw", "KingFisher", "Toucan"};
ArrayAdapter<String> adapter =new
ArrayAdapter<String>(getApplicationContext(),
android.R.layout.simple_spinner_dropdown_item,birds);
sp.setAdapter(adapter);
sp.setOnItemSelectedListener(new
AdapterView.OnItemSelectedListener() {
@Override
public void onItemSelected(AdapterView<?> adapterView, View
view, int i,
long l) {
switch (i){
case 1:
image.setImageResource(R.drawable.flamingo);
break;
case 2:
image.setImageResource(R.drawable.macaw);
break:
case 3:
image.setImageResource(R.drawable.kingfisher);
```

```
break;
case 4:
image.setImageResource(R.drawable.toucan);
break;
default:
image.setImageResource(0);
break;
}
}
@Override
public void onNothingSelected(AdapterView<?> adapterView) {
}
});
}

Putput:
```





Objective of Practical-6:

Create a menu with 5 options and selected option should appear in text box in upper case.

Code:

activity main.xml

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

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

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/edittext"

android:layout_width="220dp"

android:layout_height="220dp"

android:hint="Select any option\nfrom the menu"

android:gravity="center"
android:textSize="35dp"

app:layout_constraintBottom_toBottomOf="parent"

app:layout_constraintEnd_toEndOf="parent"

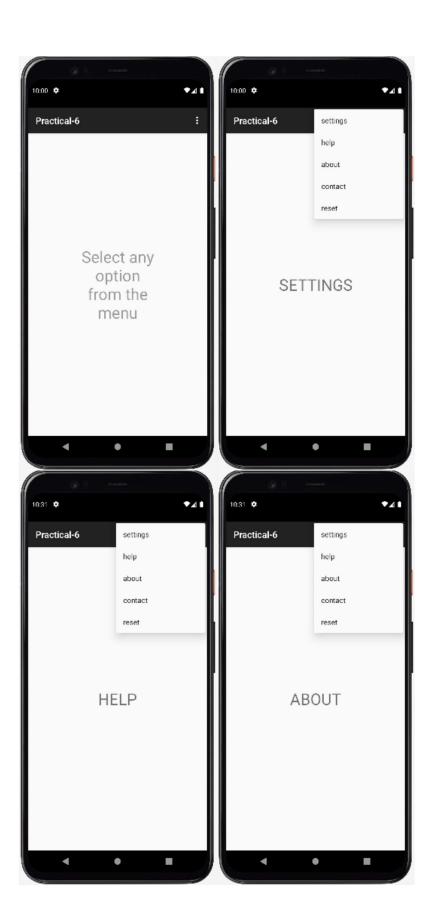
app:layout_constraintStart_toStartOf="parent"

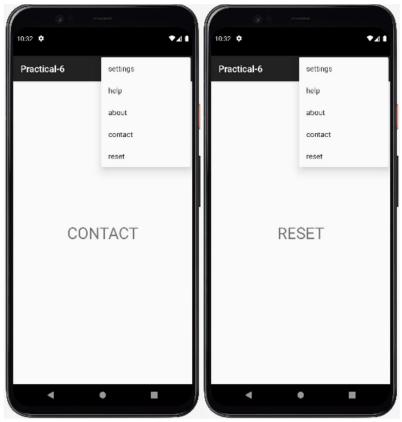
app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

```
main_menu.xml
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"</pre>
xmlns:app="http://schemas.android.com/apk/res-auto">
<item
android:icon="@drawable/ic_launcher_foreground"
android:id="@+id/Settings"
android:title="settings"/>
<item
android:icon="@drawable/ic_launcher_foreground"
app:showAsAction="never"
android:id="@+id/Help"
android:title="help"/>
<item
android:icon="@drawable/ic_launcher_foreground"
app:showAsAction="never"
android:id="@+id/about"
android:title="about"/>
<item
android:icon="@drawable/ic_launcher_foreground"
app:showAsAction="never"
android:id="@+id/contact"
android:title="contact"/>
android:icon="@drawable/ic_launcher_foreground"
app:showAsAction="never"
android:id="@+id/reset"
android:title="reset"/>
</menu>
MainActivity.java
package com.practical_6;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
TextView et:
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
et=(TextView)findViewById(R.id.edittext);
public boolean onCreateOptionsMenu(Menu menu)
MenuInflater inflater=getMenuInflater();
inflater.inflate(R.menu.main_menu,menu);
```

```
return true;
}
public boolean onOptionsItemSelected(MenuItem item)
{
et.setText(item.getTitle().toString().toUpperCase());
return super.onOptionsItemSelected(item);
}
}
Output:
```





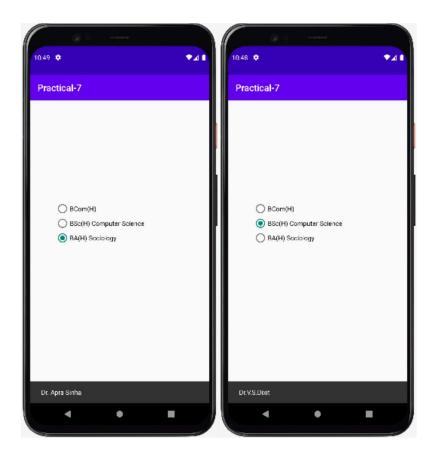
Objective of Practical-7:

Create a radio button group with radio button of all courses in your college and on selecting a particular course, teacher-in- charge of that course should appear at the bottom of the screen.

Code:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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">
<RadioGroup
android:id="@+id/rg"
android: layout_width="283dp"
android:layout_height="220dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"></RadioGroup>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
```

```
package com.practical_7;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import com.google.android.material.snackbar.Snackbar;
import java.util.HashMap;
public class MainActivity extends AppCompatActivity {
private RadioGroup rg;
private HashMap<String,String> hmap;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
initCourses();
public void initCourses()
rg=findViewById(R.id.rg);
if(hmap == null)
hmap=new HashMap<>();
hmap.put("BSc(H) Computer Science","Dr.V.S.Dixit");
hmap.put("BCom(H)","Dr.Manika Jain");
hmap.put("BA(H) Sociology","Dr. Apra Sinha");
for(String name:hmap.keySet()){
RadioButton rbutton=new RadioButton(MainActivity.this);
rbutton.setText(name);
rg.addView(rbutton);
rg.setOnCheckedChangeListener(new
RadioGroup.OnCheckedChangeListener() {
@Override
public void onCheckedChanged(RadioGroup radioGroup, int i) {
int checkedid=rg.getCheckedRadioButtonId();
RadioButton rbutton=findViewById(checkedid);
Snackbar.make(rg,hmap.get(rbutton.getText().toString()),Snackbar
.LENGTH_SHORT).show()
}
});
}
Output:
```



Objective of Practical-8:

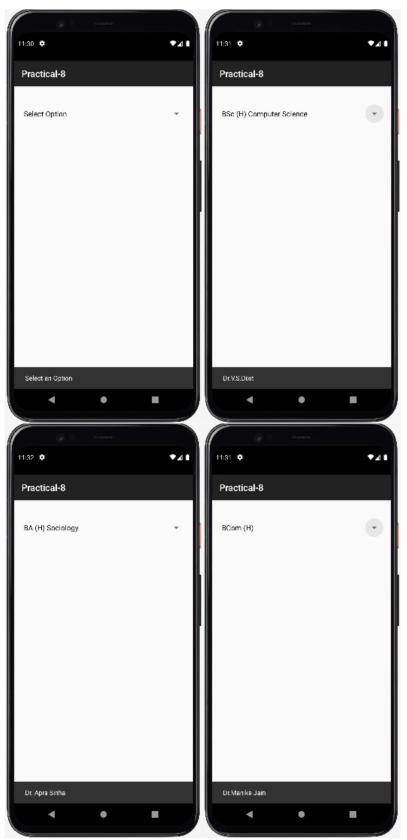
Create a list of all courses in your college and on selecting a particular course parent department and the teacher-in-charge of that department should appear at the bottom of the screen.

Code:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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/spinner"
android:layout_width="367dp"
android:layout_height="43dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
```

```
app:layout_constraintVertical_bias="0.063" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_8;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast:
import com.google.android.material.snackbar.Snackbar;
public class MainActivity extends AppCompatActivity {
Spinner sp:
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
sp=(Spinner) findViewById(R.id.spinner);
String courses[]={"Select Option","BSc (H) Computer
Science", "BCom (H)", "BA
(H) Sociology"};
ArrayAdapter<String> arrayView=new
ArrayAdapter<String>(getApplicationContext(),android.R.layout.si
mple_spinner_dropdow
n_item,courses);
sp.setAdapter(arrayView);
sp.setOnItemSelectedListener(new
AdapterView.OnItemSelectedListener(){
@Override
public void onItemSelected(AdapterView<?> av, View view, int i,
long l){
switch (i){
case 1:
Snackbar.make(av,"Dr.V.S.Dixit",Snackbar.LENGTH_SHORT).show();
break;
case 2:
Snackbar.make(av,"Dr.Manika
Jain", Snackbar.LENGTH_SHORT).show();
break:
case 3:
Snackbar.make(av,"Dr. Apra
Sinha", Snackbar. LENGTH_SHORT).show();
break;
default:
Snackbar.make(av, "Select an
Option", Snackbar.LENGTH_SHORT).show();
break;
}
}
```

```
@Override
public void onNothingSelected(AdapterView<?> adapterView) {
}
});
}
}
Output:
```



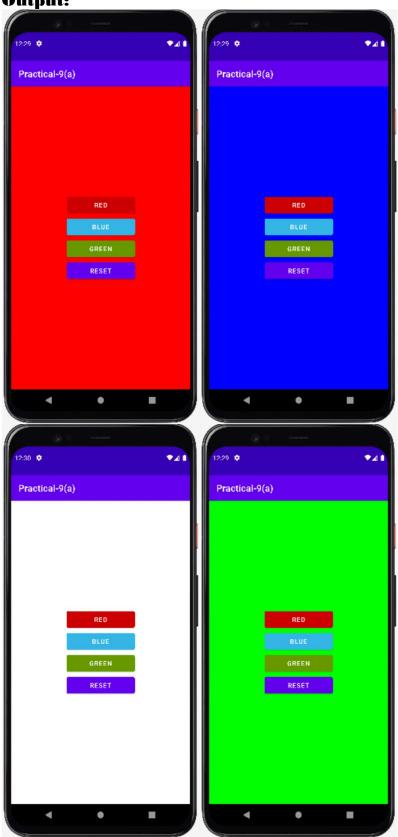
Objective of Practical-9 a)

Create an application with three buttons (with different color names) vertically aligned, on selecting a button color of the screen will change.

```
activity_main.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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:lavout width="match parent"
android:id="@+id/SuperParent"
android:layout_height="match_parent"
tools:context=".MainActivity">
<LinearLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="vertical"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintBottom_toBottomOf="parent">
<Button
android: layout_width="150dp"
android:layout_height="wrap_content"
android:id="@+id/btnRed"
android:layout_gravity="center"
android:backgroundTint="@android:color/holo_red_dark"
android:text="RED"/>
<Button
android: layout_width="150dp"
android:layout_height="wrap_content"
android:id="@+id/btnBlue"
android:layout_gravity="center"
android:backgroundTint="@android:color/holo_blue_light"
android:text="BLUE"/>
<Button
android: layout_width="150dp"
android:layout_height="wrap_content"
android:id="@+id/btnGreen"
android:gravity="center"
android:backgroundTint="@android:color/holo_green_dark"
android:text="GREEN"/>
<Button
android: layout_width="150dp"
android:layout_height="wrap_content"
android:id="@+id/btnReset"
android:gravity="center"
android:text="Reset"/>
```

```
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_9a;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import androidx.constraintlayout.widget.ConstraintLayout;
import android.widget.Button;
public class MainActivity extends AppCompatActivity implements
View.OnClickListener {
Button red, blue, green, reset;
ConstraintLayout layoutSuperParent;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
layoutSuperParent=(ConstraintLayout)findViewById(R.id.SuperParen
t);
red=findViewById(R.id.btnRed);
blue=findViewById(R.id.btnBlue);
green=findViewById(R.id.btnGreen);
reset=findViewById(R.id.btnReset);
red.setOnClickListener(this);
blue.setOnClickListener(this);
green.setOnClickListener(this);
reset.setOnClickListener(this);
@Override
public void onClick(View view)
int idd=view.getId();
switch (idd){
case R.id.btnRed:
layoutSuperParent.setBackgroundColor(Color.RED);
break:
case R.id.btnBlue:
layoutSuperParent.setBackgroundColor(Color.BLUE);
break:
case R.id.btnGreen:
layoutSuperParent.setBackgroundColor(Color.GREEN);
case R.id.btnReset:
layoutSuperParent.setBackgroundColor(Color.WHITE);
break;
}
}
}
```



Objective of Practical-9 b)

Create an application with three buttons horizontally aligned, on selecting a button color of the screen will change.

```
activity_main.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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:lavout width="match parent"
android:id="@+id/SuperParent"
android:layout_height="match_parent"
tools:context=".MainActivity">
<LinearLayout
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="horizontal"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintBottom_toBottomOf="parent">
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/btnRed"
android:layout_gravity="center"
android:backgroundTint="@android:color/holo_red_dark"
android:text="RED"/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/btnBlue"
android:layout_gravity="center"
android:backgroundTint="@android:color/holo_blue_light"
android:text="BLUE"/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/btnGreen"
android:gravity="center"
android:backgroundTint="@android:color/holo_green_dark"
android:text="GREEN"/>
<Button
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:id="@+id/btnReset"
android:gravity="center"
android:text="Reset"/>
```

```
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_9b;
import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import androidx.constraintlayout.widget.ConstraintLayout;
import android.widget.Button;
public class MainActivity extends AppCompatActivity implements
View.OnClickListener {
Button red, blue, green, reset;
ConstraintLayout layoutSuperParent;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
layoutSuperParent=(ConstraintLayout)findViewById(R.id.SuperParen
t);
red=findViewById(R.id.btnRed);
blue=findViewById(R.id.btnBlue);
green=findViewById(R.id.btnGreen);
reset=findViewById(R.id.btnReset);
red.setOnClickListener(this);
blue.setOnClickListener(this);
green.setOnClickListener(this);
reset.setOnClickListener(this);
@Override
public void onClick(View view)
int idd=view.getId();
switch (idd){
case R.id.btnRed:
layoutSuperParent.setBackgroundColor(Color.RED);
break:
case R.id.btnBlue:
layoutSuperParent.setBackgroundColor(Color.BLUE);
break:
case R.id.btnGreen:
layoutSuperParent.setBackgroundColor(Color.GREEN);
case R.id.btnReset:
layoutSuperParent.setBackgroundColor(Color.WHITE);
break;
}
}
}
```



Objective of Practical-10:

Create a Login application (check username and password). On successful login, pop up the message.

("Welcome username")

```
activity_main.xml
```

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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:lavout width="match parent"
android:layout_height="match_parent"
tools:context=".MainActivity">
<EditText
android:id="@+id/etname"
android:lavout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:hint="Enter Your ID:"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
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="0.183" />
<EditText
android:id="@+id/etPassword"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:hint="Password"
android:inputType="textPassword"
app:layout_constraintBottom_toBottomOf="parent"
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="0.325" />
<Button
android:id="@+id/btnLogin"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Login"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.474"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
```

```
app:layout_constraintVertical_bias="0.592" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_10;
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;
import android.widget.Toast:
public class MainActivity extends AppCompatActivity {
private EditText Name;
private EditText Password;
private Button Login;
@Override
public void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
Name= (EditText)findViewById(R.id.etname);
Password = (EditText)findViewBvId(R.id.etPassword):
Login = (Button) findViewById(R.id.btnLogin);
Login.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View view) {
validate(Name.getText().toString(),Password.getText().toString()
}
});
private void validate(String userName, String userPassword){
if((userName.equals("Admin")) && (userPassword.equals("1234")))
Toast.makeText(MainActivity.this,"Welcome User",
Toast.LENGTH_SHORT).show();
else if( userName.isEmpty() || userPassword.isEmpty()) {
Toast.makeText(MainActivity.this," Please enter all the details
correctly", Toast.LENGTH_SHORT).show();
else{
Toast.makeText(MainActivity.this," Not Valid Credentials",
Toast.LENGTH_SHORT).show();
}
Output:
```



Objective of Practical-11:

Create a login application as above, on successful login redirect to another activity with logout button. On click of logout button a dialog appears with OK and CANCEL button. On OK button click go to login activity and on CANCEL stay at same activity.

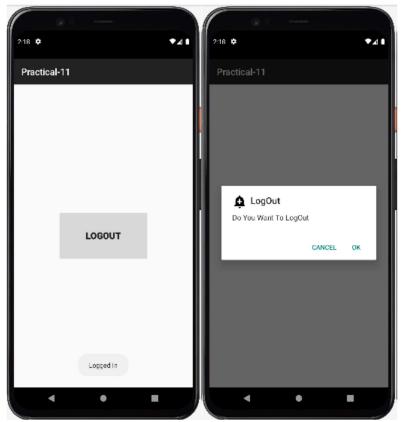
activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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/name"
android:inputType="textPersonName"
android: layout_width="120dp"
android:layout_height="wrap_content"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
```

```
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintHorizontal_bias="0.85"
app:layout_constraintVertical_bias="0.3"/>
<EditText
android:id="@+id/password"
android: layout_width="130dp"
android:layout_height="wrap_content"
android:inputType="numberPassword"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.852"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.427" />
<TextView
android:id="@+id/name_1"
android:layout_width="wrap_content"
android:text="USERNAME"
android:textSize="25dp"
android:layout_height="wrap_content"
app:layout_constraintTop_toTopOf="parent"
android:gravity="center"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintHorizontal_bias="0.2"
app:layout_constraintVertical_bias="0.3"/>
<TextView
android:id="@+id/password_1"
android:layout_width="140dp"
android:layout_height="wrap_content"
android:text="PASSWORD"
android:textSize="25dp"
android:gravity="center"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.2"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.427" />
<Button
android:id="@+id/login"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Login"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.693" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
activity_main2.xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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=".MainActivity2">
<Button
android:id="@+id/logout"
android:layout_width="199dp"
android:layout_height="110dp"
android:text="LOGOUT"
android:textSize="20sp"
android:textStyle="bold"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.499" />
</androidx.constraintlayout.widget.ConstraintLayout>
MainActivity.java
package com.practical_11;
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;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
private Button login;
private EditText name,password;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
login=(Button)findViewById(R.id.login);
name=(EditText)findViewById(R.id.name);
password=(EditText)findViewById(R.id.password);
login.setOnClickListener(new View.OnClickListener(){
@Override
public void onClick(View view)
if((name.getText().toString().toLowerCase().eguals("pritam")) &&
(password.getText().toString().toLowerCase().equals("2506")))
Toast.makeText(MainActivity.this,"Logged
```

```
In", Toast.LENGTH_SHORT).show();
Intent i=new Intent(MainActivity.this, MainActivity2.class);
startActivity(i);
}
else{
Toast.makeText(MainActivity.this,"Enter Valid
Password", Toast.LENGTH_SHORT).show();
}
});
MainActivity2.java
package com.practical_11;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
public class MainActivity2 extends AppCompatActivity {
private Button logout;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main2);
logout=(Button)findViewById(R.id.logout);
logout.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View view) {
AlertDialog.Builder(MainActivity2.this).setTitle("LogOut").setMe
ssage("Do You Want To
LogOut").setPositiveButton("OK",(dialog,which)-
>logout()).setNegativeButton("CANCEL", null).setIcon(R.drawable.a
lert_icon).show();
}
});
public void logout()
super.finish();
}
Output:
```



Objective of Practical-12:

Code:

activity main.java

android:id="@+id/name"

android:layout_width="wrap_content"

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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="345dp"
android:layout_height="99dp"
android:layout_marginTop="36dp"
android:gravity="center"
android:hint="Enter Your Details"
android:textSize="30dp"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
<EditText
```

```
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:hint="Name"
app:layout_constraintBottom_toTopOf="@+id/age"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView"
app:layout_constraintVertical_bias="0.635" />
<EditText
android:id="@+id/age"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:hint="Age"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.37" />
<Button
android:id="@+id/insert"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="INSERT"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.604" />
<Button
android:id="@+id/update"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="UPDATE"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.715" />
<Button
android:id="@+id/delete"
android: layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="116dp"
android:text="DELETE"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
```

```
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="1.0" />
<EditText
android:id="@+id/mobile"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:hint="Mobile No."
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.454" />
<Button
android:id="@+id/view"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginBottom="40dp"
android:text="View"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="1.0" />
</androidx.constraintlayout.widget.ConstraintLayout>
Dbhelper.java
package com.practical;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteOpenHelper;
import android.database.sqlite.SQLiteDatabase;
import androidx.annotation.Nullable;
public class DBhelper extends SQLiteOpenHelper{
public DBhelper(@Nullable Context context)
super(context, "user09.db", null, 1);
ን
@Override
public void onCreate(SQLiteDatabase db) {
db.execSQL("create table student(sid integer primary key
autoincrement, name
text,age text,mobile text)");
@Override
public void onUpgrade(SOLiteDatabase db, int i, int i1) {
db.execSQL("drop table if exists student");
```

```
public Boolean insert_user_data(String name,String age,String
mobile)
SQLiteDatabase db= this.getWritableDatabase();
ContentValues contentValues=new ContentValues();
contentValues.put("name", name);
contentValues.put("age",age);
contentValues.put("mobile", mobile);
long result=db.insert("student", null, contentValues);
if(result==-1){
return false;
}
else {
return true;
public Boolean update_user_data(String name, String age, String
mobile)
SQLiteDatabase db=this.getWritableDatabase();
ContentValues contentValues=new ContentValues();
contentValues.put("age",age);
contentValues.put("mobile", mobile);
Cursor cursor=db.rawQuery("select * from student where
name=?",new String[]
{name});
if(cursor.getCount()>0)
long result=db.update("student",contentValues,"name=?",new
String[]
{name});
if(result==-1)
return false;
else {
return true;
}
else{
return false;
public Boolean delete_user_data(String name)
SQLiteDatabase db=this.getWritableDatabase();
Cursor cursor=db.rawOuery("select * from student where
name=?",new String[]
{name});
if(cursor.getCount()>0)
```

```
long result=db.delete("student","name=?",new String[]{name});
if(result==-1)
return false;
else {
return true;
else{
return false;
public Cursor getdata()
SQLiteDatabase db = this.getWritableDatabase();
Cursor cursor=db.rawQuery("select * from student",null);
return cursor;
}
MainActivity.java
package com.practical;
import android.database.Cursor;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
Button insert, update, delete, view;
DBhelper db;
EditText name, age, mobile;
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
name=findViewById(R.id.name);
age=findViewById(R.id.age);
mobile=findViewById(R.id.mobile);
update=findViewById(R.id.update);
insert=findViewById(R.id.insert);
delete=findViewBvId(R.id.delete);
view=findViewById(R.id.view);
db= new DBhelper(this);
insert.setOnClickListener(new View.OnClickListener(){
```

```
@Override
public void onClick(View view) {
String nameTXT=name.getText().toString();
String ageTXT=age.getText().toString();
String mobileTXT=mobile.getText().toString();
checkinsertdata=db.insert_user_data(nameTXT,ageTXT,mobileTXT);
if(checkinsertdata==true)
Toast.makeText(getApplicationContext(),"Data Inserted
Successfully", Toast.LENGTH_SHORT).show();
}
else {
Toast.makeText(getApplicationContext(), "Data Insertion was
Unsuccessful", Toast.LENGTH_SHORT).show();
ን
}
});
update.setOnClickListener(new View.OnClickListener(){
@Override
public void onClick(View view) {
String nameTXT = name.getText().toString();
String ageTXT = age.getText().toString();String mobileTXT =
mobile.getText().toString();
boolean checkupdatedata =
db.update_user_data(nameTXT,ageTXT,mobileTXT);
if(checkupdatedata==true)
Toast.makeText(MainActivity.this,"Data Updation
Successfull", Toast.LENGTH_SHORT).show();
}
else {
Toast.makeText(MainActivity.this,"Data updation was
Unsuccessful", Toast.LENGTH_SHORT).show();
}
}):
delete.setOnClickListener(new View.OnClickListener(){
@Override
public void onClick(View view) {
String nameTXT=name.getText().toString();
Boolean checkdeletedata=db.delete_user_data(nameTXT);
if(checkdeletedata==true)
Toast.makeText(getApplicationContext(),"Data Deletion
Successfull", Toast.LENGTH_SHORT).show();
}
else {
Toast.makeText(getApplicationContext(), "Data Deletion was
Unsuccessful", Toast.LENGTH_SHORT).show();
```

```
}
}
});
view.setOnClickListener(new View.OnClickListener(){
@Override
public void onClick(View view) {
Cursor res = db.getdata();
if(res.getCount()==0)
Toast.makeText(MainActivity.this,"No Record
Found", Toast. LENGTH_SHORT). show();
return;
StringBuffer buffer = new StringBuffer();
while (res.moveToNext())
buffer.append("name: "+res.getString(1)+"\n");
buffer.append("age: "+res.getString(2)+"\n");
buffer.append("mobile: "+res.getString(3)+"\n");
AlertDialog.Builder builder=new
AlertDialog.Builder(MainActivity.this);
builder.setCancelable(true);
builder.setTitle("Application Entries");
builder.setMessage(buffer.toString());
builder.show();
}
}
});
@Override
public boolean onCreateOptionsMenu(Menu menu) {
MenuInflater inflater=getMenuInflater();
inflater.inflate(R.menu.menu_main,menu);
return true;
}
Output:
```



Enter Your Details

Ashutosh Kumar Pandey

19

9988776655

INSERT

UPDATE

DELETE

Data Inserted Successfully

VIEW



Enter Your Details

Ashutosh Kumar Pandey

19

9988776644

INSERT

UPDATE

DELETE

Data Updation Successfull

VIEW

