CO 4 & 5

1. Develop an application that implements Spinner component and perform event handling

XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    android:orientation="horizontal">


    <Spinner
        android:id="@+id/spinner1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1" />

    <Spinner
        android:id="@+id/spinner2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1" />

</LinearLayout>
```

Curserview.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent">


    <TextView
        android:id="@+id/tv1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="TextView" />
</LinearLayout>
```

tv.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<TextView xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent">
</TextView>
```

```java
package com.example.spinner;


import androidx.appcompat.app.AppCompatActivity;


import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.os.Bundle;

import android.view.View;

import android.widget.AdapterView;

import android.widget.ArrayAdapter;

import android.widget.CursorAdapter;

import android.widget.SimpleCursorAdapter;

import android.widget.Spinner;

import android.widget.Toast;


public class MainActivity extends AppCompatActivity {

    Spinner sp,sp1;

    SQLiteDatabase db;


    String s[]={"Red","Green","Blue","Yellow"};

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);


        sp = (Spinner) findViewById(R.id.spinner1);

        sp1 = (Spinner) findViewById(R.id.spinner2);

        ArrayAdapter<String> aa = new ArrayAdapter<String>(this, R.layout.tv, s);

        sp.setAdapter(aa);

        sp.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
```

```java
            @Override

            public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {

                Toast.makeText(getApplicationContext(), s[position], Toast.LENGTH_SHORT).show();


            }


            @Override

            public void onNothingSelected(AdapterView<?> parent) {

                return;

            }

        });

        try {

            db = openOrCreateDatabase("db1", MODE_PRIVATE, null);

            db.execSQL("create table emp(eno integer,ename tyext,ecountry text)");

            db.execSQL("insert into emp values(1,'Nisha','India')");

            db.execSQL("insert into emp values(2,'Maya','US')");

            db.execSQL("insert into emp values(3,'Manju','UK')");

            db.execSQL("insert into emp values(4,'Neenu','Canada')");

        } catch (Exception e) {

        }

        Cursor c = db.rawQuery("select eno as _id,ename as name,ecountry as country from emp",
null);

        String s1[] = {"country"};

        int ids[] = {R.id.tv1};

        CursorAdapter ca = new SimpleCursorAdapter(this, R.layout.cursorview, c, s1, ids);

        sp1.setAdapter(ca);


        sp1.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {

            @Override

            public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {

                Cursor item=(Cursor)parent.getSelectedItem();
```

```java
            String value=(item.getString(2));

            Toast.makeText(getApplicationContext(),value,Toast.LENGTH_SHORT).show();

        }


        @Override
        public void onNothingSelected(AdapterView<?> parent) {


        }
    });


  }
}
```

OUTPUT

2. Create database using SQLite and perform INSERT and SELECT

3 Perform UPDATE and DELETE on SQLite database

XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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/tvid"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Enter id"
        android:layout_marginTop="50dp"
        android:textColor="@color/black"
        android:textSize="20dp"/>

    <EditText
        android:id="@+id/etid"
        android:layout_width="146dp"
        android:layout_height="wrap_content"
        android:layout_marginLeft="40dp"
        android:layout_marginTop="30dp"
```

```xml
    android:layout_toRightOf="@id/tvid"

    android:ems="10"

    android:inputType="number"

    android:text=""

    android:textSize="24sp"

    android:textStyle="bold" />



<Button

    android:id="@+id/btsearch"

    android:layout_width="wrap_content"

    android:layout_height="62dp"

    android:layout_marginLeft="65dp"

    android:layout_marginTop="30dp"

    android:layout_toRightOf="@id/etid"

    android:text="Search" />



<TextView

    android:id="@+id/tvname"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_marginTop="150dp"

    android:text="Enter Name"

    android:textColor="@color/black"

    android:textSize="20dp" />



<EditText

    android:id="@+id/etname"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_marginLeft="11dp"

    android:layout_marginTop="150dp"

    android:layout_toRightOf="@id/tvname"
```

```xml
        android:ems="10"

        android:inputType="textPersonName"

        android:text="" />

    <TextView

        android:id="@+id/tvsalary"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="250dp"

        android:text="Enter Salary"

        android:textColor="@color/black"

        android:textSize="20dp" />


    <EditText

        android:id="@+id/etsalary"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginLeft="11dp"

        android:layout_marginTop="250dp"

        android:layout_toRightOf="@id/tvsalary"

        android:ems="10"

        android:inputType="textPersonName"

        android:text="" />

    <TextView

        android:id="@+id/tvdob"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="350dp"

        android:text="Enter DOB"

        android:textColor="@color/black"

        android:textSize="20dp" />


    <EditText

        android:id="@+id/etdob"
```

```xml
        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginLeft="11dp"

        android:layout_marginTop="350dp"

        android:layout_toRightOf="@id/tvdob"

        android:ems="10"

        android:inputType="date"

        android:text="" />


    <Button

        android:id="@+id/btinsert"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="450dp"

        android:text="insert" />

    <Button

        android:id="@+id/btdelete"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="450dp"

        android:text="delete"

        android:layout_toRightOf="@id/btinsert"/>

    <Button

        android:id="@+id/btupdate"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="550dp"

        android:text="update" />

    <Button

        android:id="@+id/btclear"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_marginTop="550dp"
```

```
        android:text="clear"

        android:layout_toRightOf="@id/btupdate"/>



</RelativeLayout>
```

JAVA

```java
package com.example.database;


import androidx.appcompat.app.AppCompatActivity;


import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

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 {

    SQLiteDatabase db;

    EditText id,name,salary,dob;

    Button insert,delete,update,clear,search;


    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        id = (EditText) findViewById(R.id.etid);
```

```java
        name = (EditText) findViewById(R.id.etname);

        salary = (EditText) findViewById(R.id.etsalary);

        dob = (EditText) findViewById(R.id.etdob);

        insert = (Button) findViewById(R.id.btinsert);

        delete = (Button) findViewById(R.id.btdelete);

        update = (Button) findViewById(R.id.btupdate);

        clear = (Button) findViewById(R.id.btclear);

        search = (Button) findViewById(R.id.btsearch);

        try {


            db = openOrCreateDatabase("empdb", MODE_PRIVATE, null);

            db.execSQL("create table employee(id integer primary key,name text,sal number,dob date)");

        } catch (Exception e) {

        }



        insert.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                try {

                    db.execSQL("insert into employee values(" + id.getText().toString() + ",'" +
name.getText().toString() + "'," + salary.getText().toString() +",'" + dob.getText().toString() + "')");

                    Toast.makeText(getApplicationContext(), "Record Inserted Successsfully",
Toast.LENGTH_SHORT).show();


                } catch (Exception e) {

                }


                id.setText("");

                name.setText("");

                salary.setText("");

                dob.setText("");
```

```java
        }
    });


    search.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String x = id.getText().toString();
            Cursor c = db.rawQuery("select *from employee where id=" + x, null);
            if (c.getCount() == 0) {
                Toast.makeText(getApplicationContext(), "No such Record",
Toast.LENGTH_SHORT).show();
                clear.callOnClick();
                id.setText(x);
            } else {
                c.moveToFirst();
                clear.callOnClick();
                id.setText(x);
                name.setText(c.getString(1));
                salary.setText(c.getString(2));
                dob.setText(c.getString(3));
            }
        }
    });
    update.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            db.execSQL("update employee set name='" + name.getText().toString() + "',sal=" +
salary.getText().toString() + ",dob='" + dob.getText().toString() + "'where id=" + id.getText());
            Toast.makeText(getApplicationContext(), "Record Updated Successsfully",
Toast.LENGTH_SHORT).show();
        }
    });
```

```java
        delete.setOnClickListener(new View.OnClickListener() {

          @Override

          public void onClick(View v) {

            db.execSQL("delete from employee where id=" + id.getText().toString());

            Toast.makeText(getApplicationContext(), "Record Deleted Successsfully",
Toast.LENGTH_SHORT).show();

          }

        });


        clear.setOnClickListener(new View.OnClickListener() {

          @Override

          public void onClick(View v) {

            id.setText("");

            name.setText("");

            salary.setText("");

            dob.setText("");

            id.setId(getNextID());

          }

        });


        clear.callOnClick();

    }

    public int getNextID(){

      Cursor c=db.rawQuery("select max(id) as mid from employee",null);

      c.moveToFirst();

      if(c.getString(0)==null)

        return 1;

      else{

        int x=Integer.parseInt(c.getString(0));

        return x+1;

      }
```

```
    }


    @Override

    protected void onDestroy()

    {

        db.close();

        super.onDestroy();

    }

}
```

OUTPUT