

Ex.No: 4

Date :

Develop an application that makes use of database

AIM:

To develop an application that makes use of database.

PROCEDURE:

1. Open Eclipse IDE.
2. Create the project Ex_No_4.
3. Go to package explorer in the left hand side. Select the project Ex_No_4.
4. Go to res folder and select layout. Double click the activity_main.xml file.
5. Now you can see the Graphical layout window.
6. Drag and drop the following components:
 - a. Three TextViews with texts as Reg.No., Name and Marks
 - b. Three EditTexts
 - c. Five Buttons with labeled as ADD, VIEW, VIEW ALL, UPDATE and DELETE
7. Again go to package explorer in the left hand side. Select the project Ex_No_4.
8. Go to src folder. Double click the MainActivity.java file.
9. In java file write the activities done by the application such as, actions of button.
10. Finally run the android application.

PROGRAMS:

activity_main.xml:

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.ex_no_4.MainActivity" >

    <TextView android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:text="Reg. No."
        android:textAppearance="?android:attr/textApp
```

```

        earanceMedium"    tools:ignore="HardcodedText"
    />

<EditText
    android:id="@+id/editText1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignTop="@+id/textView1"
    android:layout_toRightOf="@+id/textView1"
    android:ems="10"
    android:inputType="number" >

    <requestFocus />
</EditText>

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/textView1"
    android:layout_below="@+id/editText1"
    android:layout_marginTop="20dp" android:text="Name"
    android:textAppearance="?android:attr/textAppearanceMedium"
    tools:ignore="HardcodedText" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/textView2"
    android:layout_below="@+id/editText2"
    android:layout_marginTop="26dp" android:text="Marks"
    android:textAppearance="?android:attr/textAppearanceMedium"
    tools:ignore="HardcodedText" />

```

```

<EditText
    android:id="@+id/editText3"
    android:layout_width="wrap_
content"
    android:layout_height="wrap
_content"
    android:layout_alignBottom=
"@+id/textView3"
    android:layout_alignLeft="@
+id/editText2"
    android:ems="10"
    android:inputType="number"
/>

<EditText android:id="@+id/editText2"
    android:layout_width="wrap_conten
t"
    android:layout_height="wrap_conte
nt"
    android:layout_alignBaseline="@+i
d/textView2"
    android:layout_alignBottom="@+id/
textView2"
    android:layout_alignLeft="@+id/ed
itText1"        android:ems="10"
    tools:ignore="TextFields" />

<Button
    android:id="@+id/button1"
    android:layout_width="wra
p_content"
    android:layout_height="wr
ap_content"
    android:layout_alignParen
tLeft="true"
    android:layout_below="@+i
d/textView3"
    android:layout_marginTop=
"32dp"    android:text="ADD"
    tools:ignore="HardcodedTe
xt" />

<Button android:id="@+id/button3"
    android:layout_width="wrap_cont
ent"
    android:layout_height="wrap_con
tent"
    android:layout_alignBaseline="@
+id/button2"

```

```
android:layout_alignBottom="@+id/button2"
android:layout_alignParentRight="true" android:text="VIEW ALL"
tools:ignore="HardcodedText" />
```

```
<Button android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/button1"
    android:layout_alignBottom="@+id/button1"
    android:layout_alignLeft="@+id/editText3"
    android:layout_marginLeft="24dp"
    android:text="VIEW"
    tools:ignore="HardcodedText"
/>
```

```
<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignLeft="@+id/button1"
    android:layout_below="@+id/button1"
    android:layout_marginLeft="27dp"
    android:layout_marginTop="18dp" android:text="UPDATE"
    tools:ignore="HardcodedText"
/>
```

```
<Button android:id="@+id/button5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/button4"
    android:layout_alignBottom="@+id/button4"
    android:layout_marginLeft="20dp"
    android:layout_toRightOf="@+id/
```

```

        button4"    android:text="DELETE"
        tools:ignore="HardcodedText" />

    </RelativeLayout>
}

```

MainActivity.java:

```

package com.example.ex_no_4;
import
android.support.v7.app.ActionBarAc
tivity; import
android.app.AlertDialog.Builder;
import android.content.Context;
import android.database.Cursor;
import
android.database.sqlite.SQLiteDatabase;
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 ActionBarActivity {
    EditText name,regno,mark;
    Button btnAdd,btnDelete,btnUpdate,btnView,btnViewAll;
    SQLiteDatabase db;
    @Override
    protected void onCreate(Bundle
        savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        regno= (EditText)findViewById(R.id.editText1);
        name= (EditText)findViewById(R.id.editText2);
        mark=(EditText)findViewById(R.id.editText3);
        btnAdd=(Button)findViewById(R.id.button1);
        btnView=(Button)findViewById(R.id.button2);
        btnViewAll=(Button)findViewById(R.id.button3);
        btnUpdate=(Button)findViewById(R.id.button4);
        btnDelete=(Button)findViewById(R.id.button5);
        db=openOrCreateDatabase("Students", Context.MODE_PRIVATE, null);
        db.execSQL("CREATE TABLE IF NOT EXISTS student(regno VARCHAR,name
        VARCHAR,mark
        VARCHAR);");
        btnAdd.setOnClickListener(new
        OnClickListener()
        {
            @Override
            public void onClick(View arg0) {

```

```

        // TODO Auto-generated method stub

        if(regno.getText().toString().trim().length()==0||name.getText().toString().trim().length()==0||mark.getText().toString().trim().length()==0) {
            showMessage("Error", "Please enter all values"); return;
        }
        db.execSQL("INSERT INTO student VALUES('"+regno.getText()+"','"+name.getText()+"','"+mark.getText()+"')");
        showMessage("Success", "Record added"); clearText();
    }
}
;
btnDelete.setOnClickListener(new OnClickListener()
{
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if(regno.getText().toString().trim().length()==0)
        { showMessage("Error", "Please enter Reg. No.");
            return;
        }
        Cursor c=db.rawQuery("SELECT * FROM student WHERE regno='"+regno.getText()+"'", null);
        if(c.moveToFirst())
        {
            db.execSQL("DELETE FROM student WHERE regno='"+regno.getText()+"'"); showMessage("Success", "Record Deleted");
        }
    }
}
else {
    showErrorMessage("Error");
}
}

```

```

        r
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        I
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        d
        R
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        g
        .
        N
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        :
        "
    )
    ;
}
clearText();
}
}); btnUpdate.setOnClickListener(new
OnClickListener()
{
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if(regno.getText().toString().trim().length()==0)
        { showMessage("Error", "Please enter
            Reg. No.");
            return;
        }
        Cursor c=db.rawQuery("SELECT * FROM student WHERE reg-
no='"+regno.getText()+"'", null);
        if(c.moveToFirst(
        ))
        { db.execSQL("UPDATE
            student SET
            name='"+name.getText()+"',mark='"+mark.getText()+"' WHERE
            regno='"+regno.getText()+"'"); showMessage("Success",
            "Record Modified");
        }
        else
        {
            showMessage("Error", "Invalid Reg. No.");
            clearText();
        }
    }
}

```

```

    }
}
)
;
btnView.setOnClickListener(new OnClickListener()
{
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if(regno.getText().toString().trim().length()==0)
        { showMessage("Error", "Please enter
          Reg. No."); return;
        }
        Cursor c=db.rawQuery("SELECT * FROM student WHERE reg-
no='"+regno.getText()+"'", null);
        if(c.moveToFirst(
        ))
        {
            name.setText(c.
                getString(1));
            mark.setText(c.
                getString(2));
        }
        else
        {
            showMessage("Error", "Invalid Reg. No.");
            clearText();
        }
    }
}); btnViewAll.setOnClickListener(new
OnClickListener()
{
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        Cursor c=db.rawQuery("SELECT * FROM student", null);
        if(c.getCount()==0)
        { showMessage("Error", "No
          records found"); return;
        }
        StringBuffer buffer=new StringBuffer();
        while(c.moveToNext())
        { buffer.append("Reg. No : "+c.getString(0)+"\n");
          buffer.append("Name : "+c.getString(1)+"\n");
          buffer.append("Mark : "+c.getString(2)+"\n\n");
        }
        showMessage("Student Details",
          buffer.toString());
    }
});

```

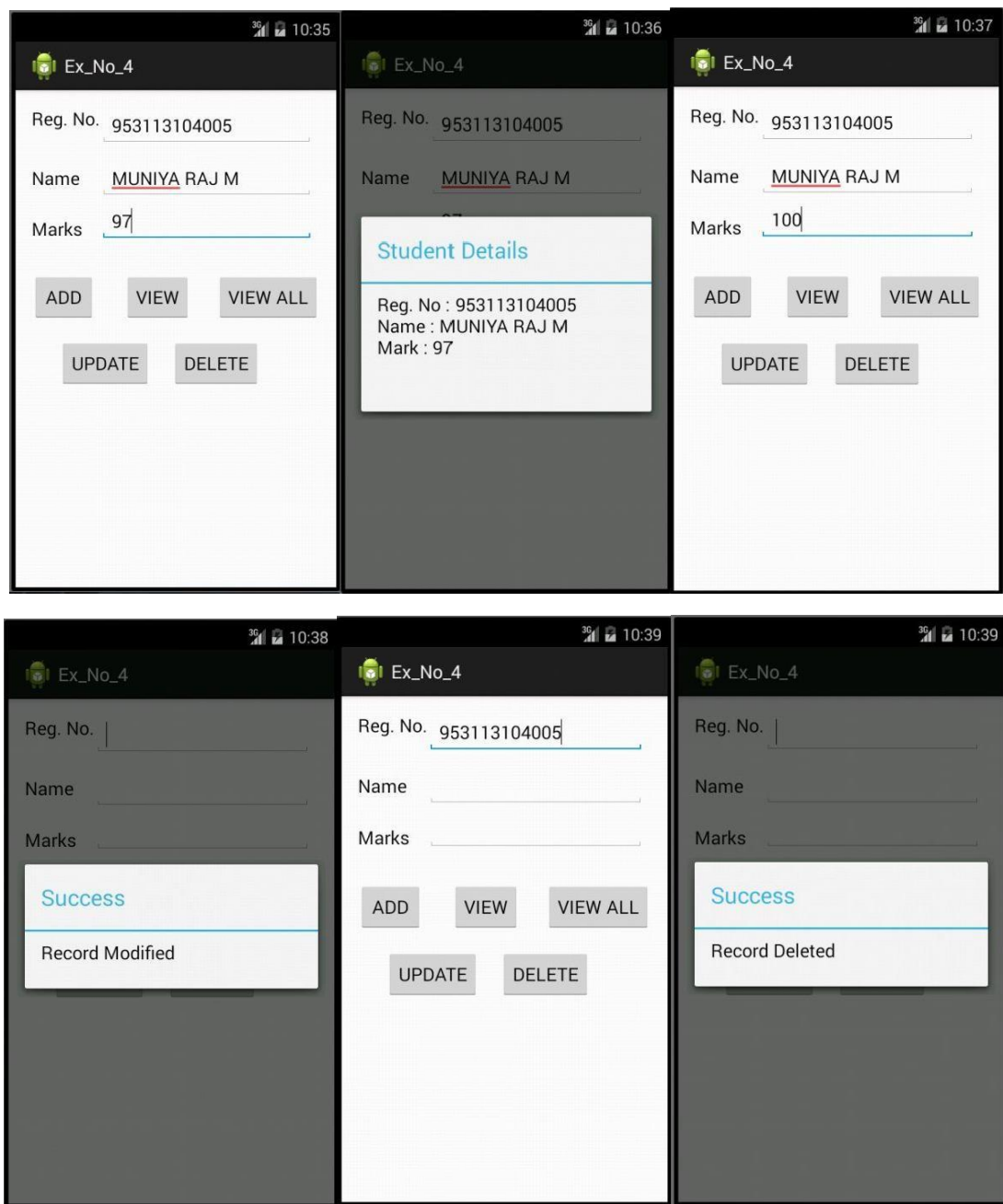


```

    } public void showMessage(String
    title,String message)
    {
        Builder builder=new
        Builder(this);
        builder.setCancelable
        (true);
        builder.setTitle(titl
        e);
        builder.setMessage(me
        ssage);
        builder.show();
    }
    public void clearText()
    {
        regno.se
        tText("")
        );
        name.set
        Text("")
        ;
        mark.set
        Text("")
        ;
        regno.re
        questFoc
        us();
    }
}

```

OUTPUT:



RESULT:

Thus the application that makes use of database has been developed and the output was verified.