Deccan Education Society's
Kirti M. Doongursee College of Arts, Science and Commerce (Autonomous)
[NAAC Accredited: "A Grade"]

S.Y. B.Sc. [Computer Science]

Practical Journal

USCSP405

Roll Number [ ]

Department of Computer Science and Information Technology

Department of Computer Science and Information Technology
Deccan Education Society's
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[NAAC Accredited: "A Grade"]

C E R T I F I C A T E

This is to certify that Mr. / Miss _____

of S.Y. B.Sc. (Computer Science) with Roll No._____ has completed _____

Practical of Paper- USCS405 under my supervision in this College during the year 2022-2023.

Lecturer-In-Charge

H.O.D.
Department of
Computer Science & IT

Date: / / 2023

Date:

Examined by:

Remarks:

Date:

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USCSP 405: Android Application Development

Sr. No.	Date	Title	Page No.	Signature
1		WRITE A PROGRAM USING KOTLIN TO IMPLEMENT CONTROL STRUCTURES AND LOOPS.		
2		WRITE A PROGRAM TO IMPLEMENT OBJECT-ORIENTED CONCEPTS IN KOTLIN.		
3		USING ANDROID DEVELOP AN APPLICATION FOR ADDITION OF TWO NUMBERS.		
4		USING ANDROID CREAT AN APP TO DEVELOP A ‘LOGIN’ PAGE.		
5		USING ANDROID CREATE AN APPLICATION FOR ACTIVITY LIFE CYCLE.		
6		USING ANDROID FORM A MENU BAR FOR THE APPLICATION TO BE SWITCHING THE PAGE TO DESIRED PAGE.		
7		USING ANDROID CREATE AN APPLICATION TO BE ABLE TO GIVE RATING FOR THE CUSTOMERS.		
8		USING ANDROID DEVELOP AN APPLICATION TO BE ALBE TO COMPLETE THE TEXT AUTOMATICALLY.		

PRACTICAL NO:- 1

AIM :-Write a program using Kotlin to implement control structures and loops.

CODE:-

```
fun main(args:  Array<String>) {
        var  language = array0f(“Ruby” , “Kotlin” , “Python” , “Java”)
        for (item in language.indices) {
                if (item  %  2 == 0 )
                    println(language[item])
            }
        }
```

Practical No:- 2

AIM:-Write a program to implement object-oriented concepts in Kotlin.

CODE:-

```
open class Bird{
        fun fly()  {
                println("flying…")
         }
}
class Duck : Bird() {
        fun swim() {
                println("swimming…")
        }
 }
fun main(args: Array<String>) {
      val duck = Duck()
      duck.fly()
      duck.swim()
 }
```

Practical No:- 3

AIM :- USING ANDROID DEVELOP AN APPLICATION FOR ADDITION OF TWO NUMBERS.

Code:-

XML file

```
<?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:text="Number 1"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.167"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.154" />

    <TextView

        android:id="@+id/textView2"
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Number 2"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.167"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.264" />
<EditText
    android:id="@+id/editText1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.8"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.139" />
<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
```

```
        app:layout_constraintHorizontal_bias="0.805"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.252" />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="ADD"
        tools:layout_editor_absoluteX="178dp"
        tools:layout_editor_absoluteY="340dp"
        android:onClick="add"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MAIN ACTIVITY FILE

```
package com.example.myapp;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void add(View view) {
        EditText txtnum1,txtnum2;
        txtnum1=(EditText) findViewById(R.id.editText1);
```

```
        txtnum2=(EditText) findViewById(R.id.editText2);
        int a=Integer.parseInt(txtnum1.getText().toString());
        int b=Integer.parseInt(txtnum2.getText().toString());
        int c=a+b;
Toast.makeText(getApplicationContext(),String.valueOf(c),Toast.LENGTH_LONG).
show();
    }
}
```

PRACTICAL NO:- 4

AIM :- USING ANDROID CREAT AN APP TO DEVELOP A 'LOGIN' PAGE.

CODE:-

XML FILE

```
<?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="104dp"
        android:layout_height="51dp"
        android:text="Login"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.12"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.175" />
    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
    android:ems="10"
    android:inputType="textPersonName"
    android:text=""
    tools:layout_editor_absoluteX="150dp"
    tools:layout_editor_absoluteY="119dp" />
<TextView
    android:id="@+id/textView2"
    android:layout_width="96dp"
    android:layout_height="46dp"
    android:text="Password"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.135"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.294" />
<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:inputType="textPersonName"
    android:text=""
    tools:layout_editor_absoluteX="150dp"
    tools:layout_editor_absoluteY="203dp" />
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Button"
```

```
        tools:layout_editor_absoluteX="130dp"
        tools:layout_editor_absoluteY="289dp"
        android:onClick="login"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MAIN ACTIVITY

```
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
   }
   public void login(View view) {
      EditText txtuser,txtpass;
      txtuser=(EditText) findViewById(R.id.editText1);
      txtpass=(EditText) findViewById(R.id.editText2);
      String user=txtuser.getText().toString();
      String pass=txtpass.getText().toString();
      if(user.equals("Kirti")&& pass.equals("1234"))
            {
                  Toast.makeText(getApplicationContext(),
        "successful",Toast.LENGTH_LONG).show();
      }
      else {
                  Toast.makeText(getApplicationContext(),
        "unsuccessful",Toast.LENGTH_LONG).show();
            }
         }
      }
```

PRACTICAL NO:- 5

AIM :- USING ANDROID CREATE AN APPLICATION FOR ACTIVITY LIFE CYCLE.

CODE:-

XML FILE

```
<?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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        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 ACTIVITY

```
package com.example.myapp;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
        @Override
        protected void onStart () {
            super.onStart();
            Toast.makeText(getApplicationContext(), "onStart",
             Toast.LENGTH_LONG).show();
```

```
    }
    @Override
    protected void onResume () {
        super.onResume();
        Toast.makeText(getApplicationContext(), "onResume",
        Toast.LENGTH_LONG).show();
    }
    @Override
    protected void onPause () {
        super.onPause();
        Toast.makeText(getApplicationContext(), "onPause",
        Toast.LENGTH_LONG).show();
    }
    @Override
    protected void onStop () {
        super.onStop();
        Toast.makeText(getApplicationContext(), "onStop",
        Toast.LENGTH_LONG).show();
    }
    @Override
    protected void onRestart () {
        super.onRestart();
        Toast.makeText(getApplicationContext(), "onRestart",
        Toast.LENGTH_LONG).show();
    }
    @Override
    protected void onDestroy () {
        super.onDestroy();
        Toast.makeText(getApplicationContext(),"onDestroy",
        Toast.LENGTH _LONG).show();
    }
}
```

Practical No.6

AIM:-USING ANDROID FORM A MENU BAR FOR THE APPLICATION TO BE SWITCHING THE PAGE TO DESIRED PAGE.

Code:-

XML FILE

```
<menu
      xmlns:android="http://schemas.android.com/apk/res/andr
      oid"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    tools:context="com.example.mymenu.MainActivity">


    <item
        android:id="@+id/item1"
        android:title="FYCS" />
    <item
        android:id="@+id/item2"
        android:title="SYCS" />
    <item
        android:id="@+id/item3"
        android:title="TYCS" />
</menu>
```

MAIN ACTIVITY

MainActivity.java

```
package com.example.mymenu;

import android.content.Intent;
import android.os.Bundle;
import com.google.android.material.snackbar.Snackbar;
import androidx.appcompat.app.AppCompatActivity;
import android.view.View;
import androidx.navigation.NavController;
import androidx.navigation.Navigation;
import androidx.navigation.ui.AppBarConfiguration;
import androidx.navigation.ui.NavigationUI;
import
com.example.mymenu.databinding.ActivityMainBinding;
import android.view.Menu;
import android.view.MenuItem;


public class MainActivity extends AppCompatActivity {
    private AppBarConfiguration appBarConfiguration;
```

```
    private ActivityMainBinding binding;
    @Override
    protected void onCreate(Bundle savedInstanceState)
{
        super.onCreate(savedInstanceState);
binding=ActivityMainBinding.inflate(getLayoutInflater(
));
        setContentView(binding.getRoot());
        setSupportActionBar(binding.toolbar);
NavControllernavController=Navigation.findNavControlle
r(this, R.id.nav_host_fragment_content_main);
        appBarConfiguration = new
AppBarConfiguration.Builder(navController.getGraph()).
build();

NavigationUI.setupActionBarWithNavController(this,
navController, appBarConfiguration);

      binding.fab.setOnClickListener(new
      View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Snackbar.make(view, "Replace with your
own                  action", Snackbar.LENGTH_LONG)
                     .setAction("Action",
null).show();
            }
        });
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the
action     bar if it is present.
        getMenuInflater().inflate(R.menu.menu_main,
menu);
        return true;
    }
    @Override
    public boolean onOptionsItemSelected(MenuItem
item) {
        switch(item.getItemId())
        {
           case R.id.item1:
                startActivity(

           new Intent(MainActivity.this,FYCS.class));
               return true;
            case R.id.item2:
               startActivity(

           new Intent(MainActivity.this,SYCS.class));
                return true;
            case R.id.item3:
```

```
                startActivity(

            new Intent(MainActivity.this,TYCS.class));
                return true;
             default:
                return
super.onOptionsItemSelected(item);
        }
    }

    @Override
    public boolean onSupportNavigateUp() {
      NavController navController =
      Navigation.findNavController(this,
      R.id.nav_host_fragment_content_main);
         return NavigationUI.navigateUp(navController,
      appBarConfiguration)
                || super.onSupportNavigateUp();
    }
}
```

PRACTICAL NO.7

AIM:-USING ANDROID CREATE AN APPLICATION TO BE ABLE TO GIVE RATING FOR THE CUSTOMERS.

CODE:-

XML FILE

```
<?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">

   <RatingBar
       android:id="@+id/ratingBar"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       app:layout_constraintBottom_toBottomOf="parent"
       app:layout_constraintEnd_toEndOf="parent"
       app:layout_constraintHorizontal_bias="0.561"
       app:layout_constraintStart_toStartOf="parent"
       app:layout_constraintTop_toTopOf="parent"
       app:layout_constraintVertical_bias="0.268" />

   <Button
       android:id="@+id/button"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:onClick="rat"
       android:text="submit"
       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>
```

MAIN ACTIVITY

```
package com.example.myapp;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
```

```
import android.widget.Button;
import android.widget.RatingBar;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
public void rat(View view) {
        RatingBar ratingbar;
        Button button;
        ratingbar=(RatingBar)findViewById(R.id.ratingBar);
        String rating=String.valueOf(ratingbar.getRating());
        Toast.makeText(getApplicationContext(), rating,
Toast.LENGTH_LONG).show();
    }
}
```

PRACTICAL NO.8

AIM:-USING ANDROID DEVELOP AN APPLICATION TO BE ALBE TO COMPLETE THE TEXT AUTOMATICALLY.

CODE:-

XML FILE

```
<?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:text="What is your favourite Programming
         language"
       app:layout_constraintBottom_toBottomOf="parent"
       app:layout_constraintEnd_toEndOf="parent"
       app:layout_constraintHorizontal_bias="0.439"
       app:layout_constraintStart_toStartOf="parent"
       app:layout_constraintTop_toTopOf="parent"
       app:layout_constraintVertical_bias="0.247" />

   <AutoCompleteTextView
       android:id="@+id/autoCompleteTextView"
       android:layout_width="200dp"
       android:layout_height="wrap_content"
       android:text=""
       app:layout_constraintBottom_toBottomOf="parent"
       app:layout_constraintEnd_toEndOf="parent"
       app:layout_constraintHorizontal_bias="0.475"
       app:layout_constraintStart_toStartOf="parent"
       app:layout_constraintTop_toTopOf="parent"
       app:layout_constraintVertical_bias="0.419" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MAIN ACTIVITY

```
package com.example.myauto;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
```

```
 import android.widget.ArrayAdapter;
 import android.widget.AutoCompleteTextView;

public class MainActivity extends AppCompatActivity {

 String[] language
 ={"C","C++","Java",".NET","iPhone","Android
","ASP.NET","PHP"};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        ArrayAdapter<String> adapter = new
ArrayAdapter<String>

(this,android.R.layout.select_dialog_item,language);
        //Getting the instance of AutoCompleteTextView
        AutoCompleteTextView  actv =  (AutoCompleteTextView)
findViewById(R.id.autoCompleteTextView);
        actv.setThreshold(1);//will start working from first
character
        actv.setAdapter(adapter);//setting the adapter data
into the AutoCompleteTextView
        actv.setTextColor(Color.RED);
    }
}
```