

Date: 24/02/2022

Lab session no:2

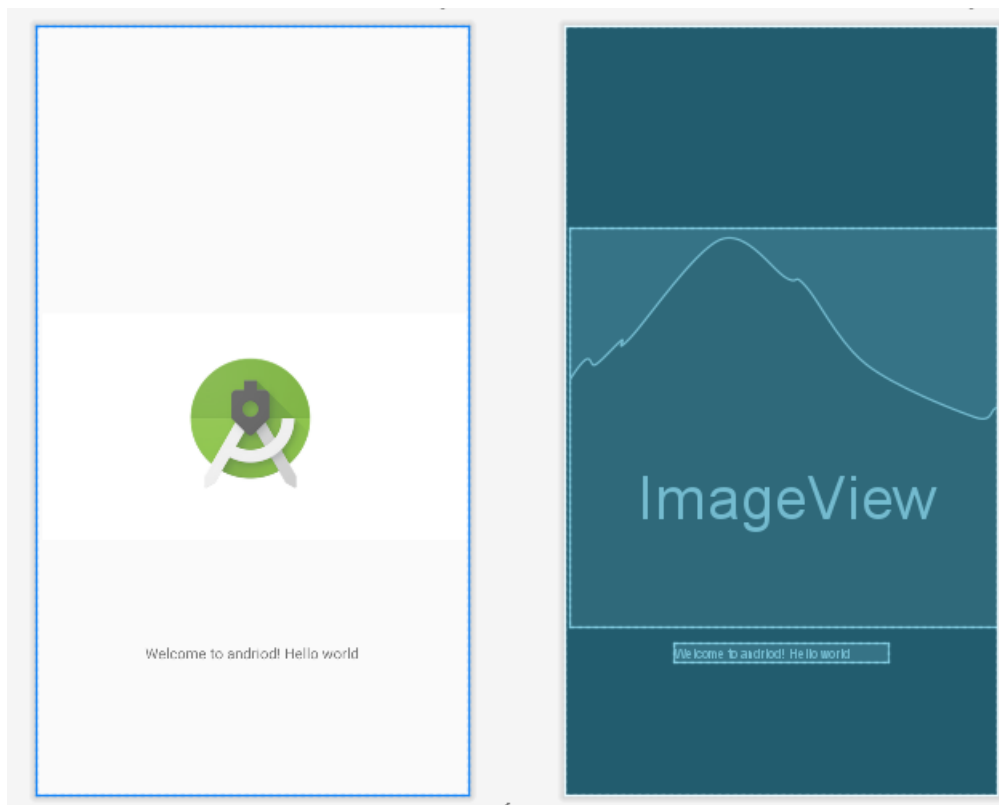
Aim:

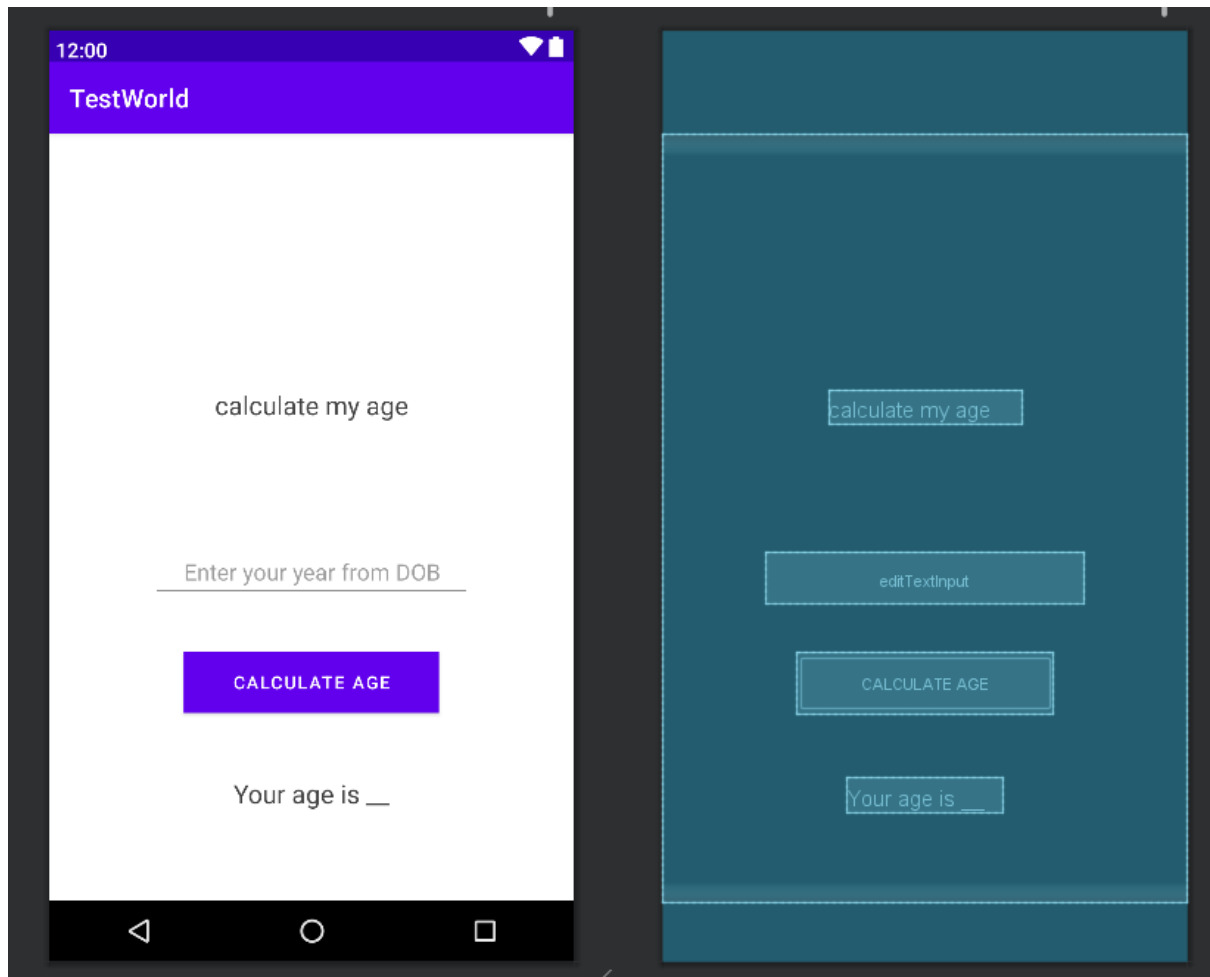
- a) Develop Hello World Program
 - b) Develop an android application to demonstrate Activity life cycle.
- Example: Develop an android application that find's my age.

Software's /IDE Tools:

Android Development Kit / Android Studio

Application User interface design:





Application Programming Interface:

API / PACKAGES	CLASSES / INTERFACES	METHODS	DESCRIPTION
import androidx.appcompat.app.AppCompatActivity;	AppCompatActivity	protected void onCreate(Bundle savedInstanceState)	onCreate(Bundle) is where you initialize your activity. When Activity is started and application is not loaded, then both onCreate() methods will be called.
import android.widget.EditText;	EditText	getText()	Determines the minimum type that getText() will return. If set, specifies that this TextView has a textual input method and should automatically capitalize what the user types.

Code/Implementation:

```
// Develop an android application to implement helloworld program
```

```
// Project Name : Testworld
```

```
/*
```

Lab Session No.	: 02
Author	: Tellakula Avinash
Date	: 24/02/2022
Roll Number	: 198W1A05C0
Description	: Implementation of helloworld and AgeCalculator
Softwares required	: Android Studio
Topics Covered	: Helloworld and age calculator

```
*/
```

a) Implement Hello World ProgramMainActivity.java

```
package com.example.helloworld;

import android.support.v7.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);
    }
}
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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"
    tools:ignore="MissingClass">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="24dp"
```

```

        android:layout_marginTop="192dp"
        android:layout_marginEnd="16dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.47"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:srcCompat="@drawable/android_studio_logo" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="32dp"
    android:layout_marginTop="91dp"
    android:layout_marginEnd="32dp"
    android:layout_marginBottom="200dp"
    android:text="Welcome to andriod! Hello world"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/imageView" />

</android.support.constraint.ConstraintLayout>

```

b) android application that find's my age

MainAcitivity.java

```

package com.avinash.testworld;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import java.util.Calendar;

public class MainActivity extends AppCompatActivity {
    EditText inputValue;
    Button calculate;
    TextView result;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        inputValue=findViewById(R.id.editTextInput);
        calculate=findViewById(R.id.calculate);
        result=findViewById(R.id.result);
        calculate.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

```

```

        int years = Calendar.getInstance().get(Calendar.YEAR);
        String doyear = inputValue.getText().toString().trim();
        int dyear = Integer.parseInt(doyear);
        int age = years - dyear;
        if (doyear.isEmpty()) {
            result.setText("Please Enter Input");
        } else if (age < 0) {
            result.setText("Enter a valid Input");
        } else {
            result.setText(String.valueOf(age));
        }
    }
}
});
}
}

```

activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/cardview_light_background"
    android:orientation="vertical"
    android:layout_gravity="center"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="200sp"
        android:text="calculate my age"
        android:textColor="@color/cardview_dark_background"
        android:textSize="20sp" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:gravity="center"
        android:layout_marginTop="100dp"
        android:hint="Enter your year from DOB"
        android:textColor="@color/black"
        android:id="@+id/editTextInput"
        android:minWidth="200dp"
        android:height="40dp"
        android:width="250dp">

    </EditText>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:gravity="center"

```

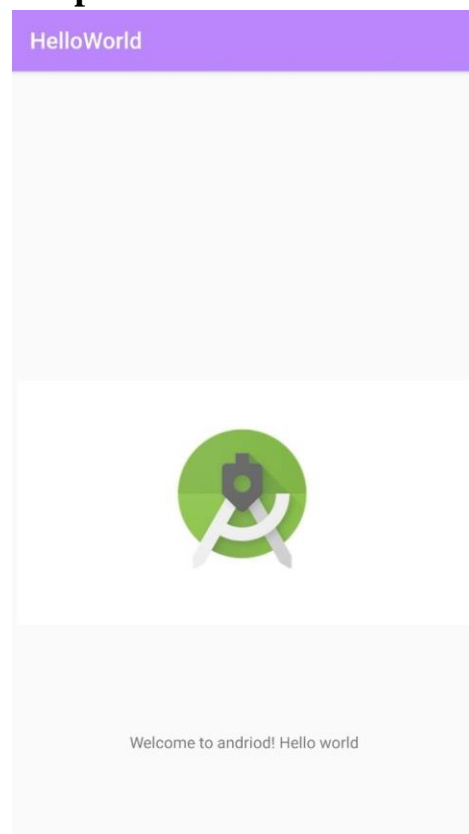
```

        android:id="@+id/calculate"
        android:text="Calculate Age"
        android:background="@color/design_default_color_primary"
        android:layout_marginTop="40dp"
        android:minWidth="200dp">
    </Button>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="50sp"
        android:text="Your age is __"
        android:id="@+id/result"
        android:textColor="@color/cardview_dark_background"
        android:textSize="20sp" />

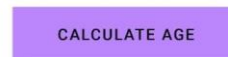
</LinearLayout>

```

Output:



calculate my age



Your age is __

TestWorld

TestWorld

calculate my age

calculate my age

2001

1987

CALCULATE AGE

CALCULATE AGE

21

35

Result:

Implementation of helloworld application is done successfully
Implementation of android application that find's my age is done successfully.