Date: 24/02/2022

Lab session no:2

**Aim:**  [a) Develop Hello World Program](#_Toc97810)

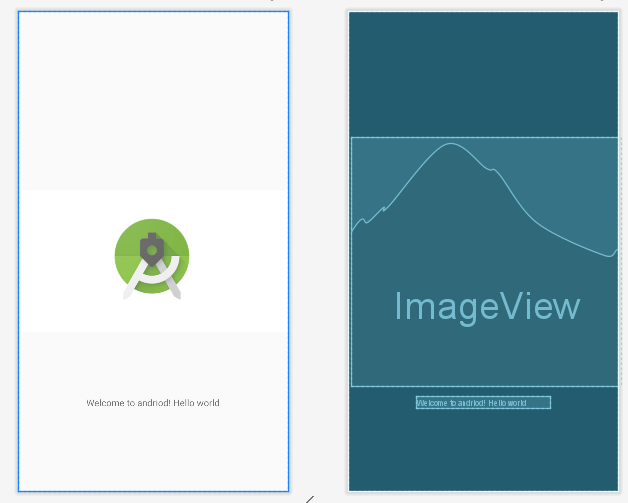
[b) Develop an android application to demonstrate Activity life cycle.](#_Toc97810)

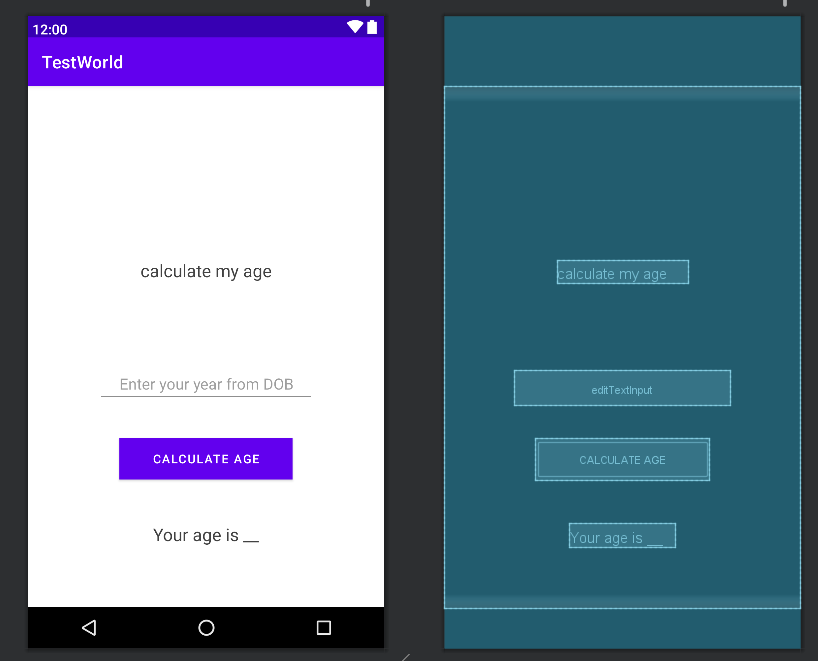
Example: Develop an android application that find's my age.

**Software’s /IDE Tools:**

Android Development Kit / Android Studio

**Application User interface design:**

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****

**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

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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

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a) Implement Hello World Program

*MainAcitivity.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

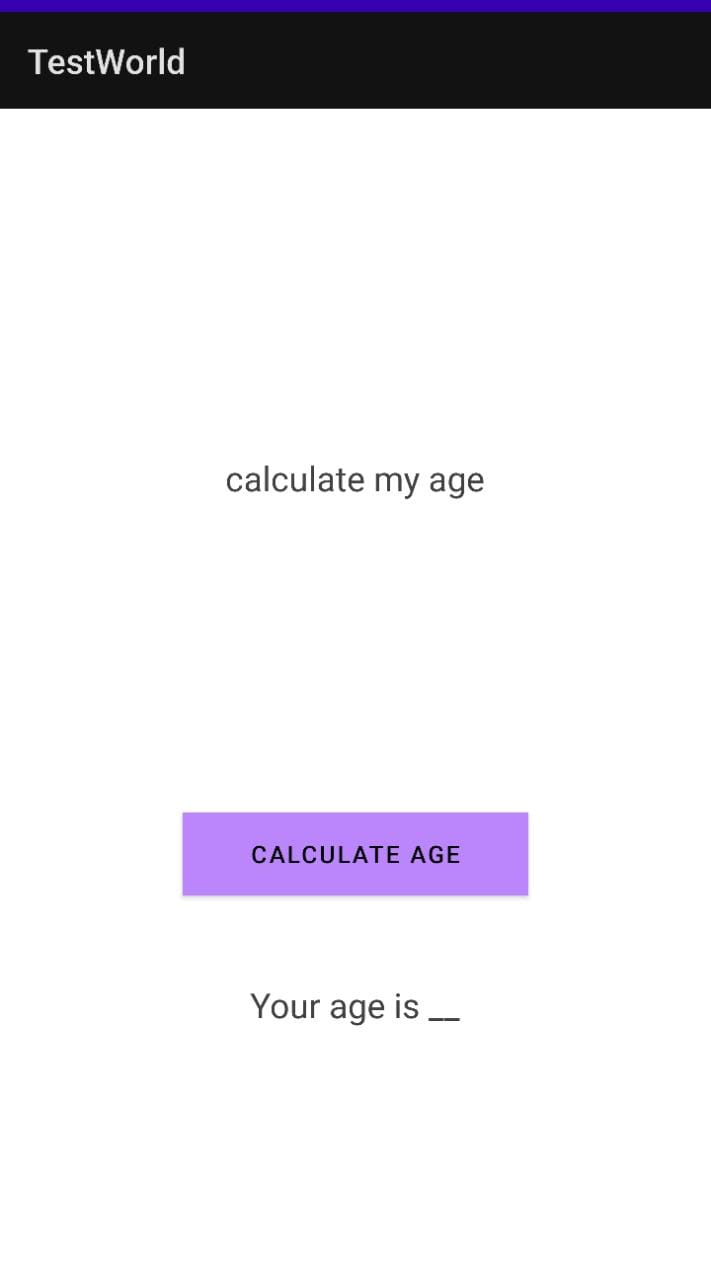
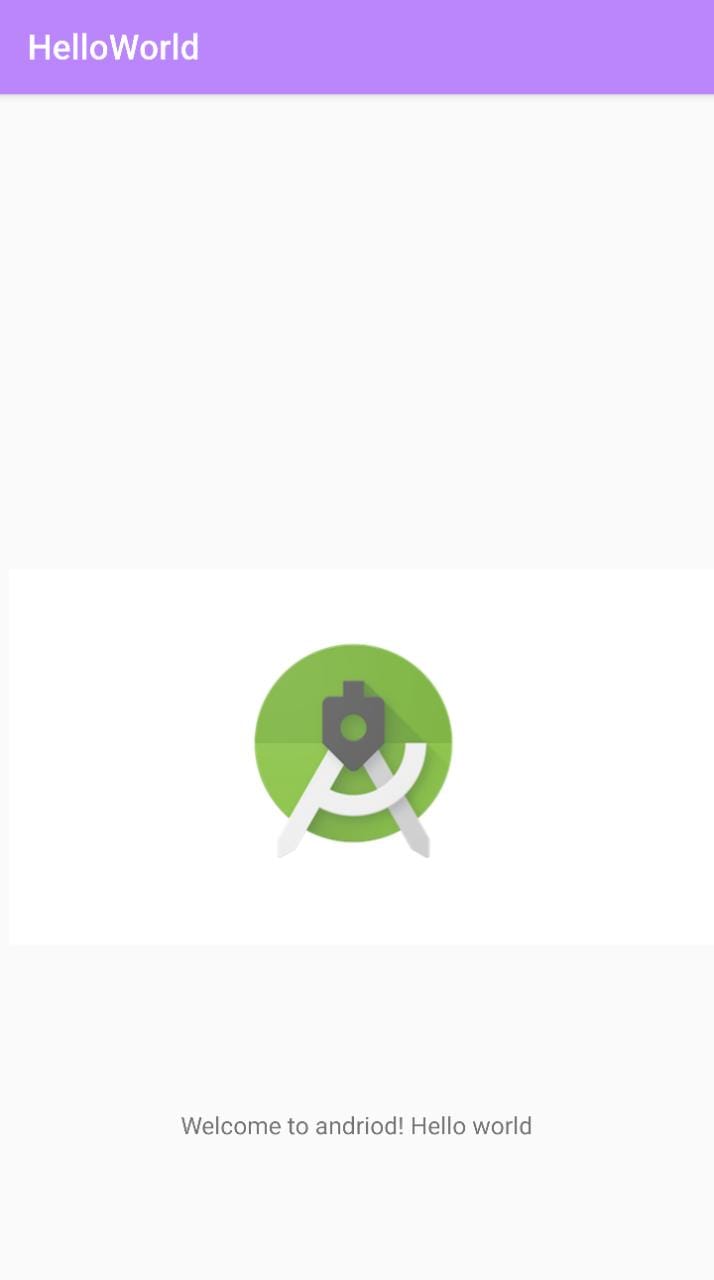
*MainAcitivity.java*

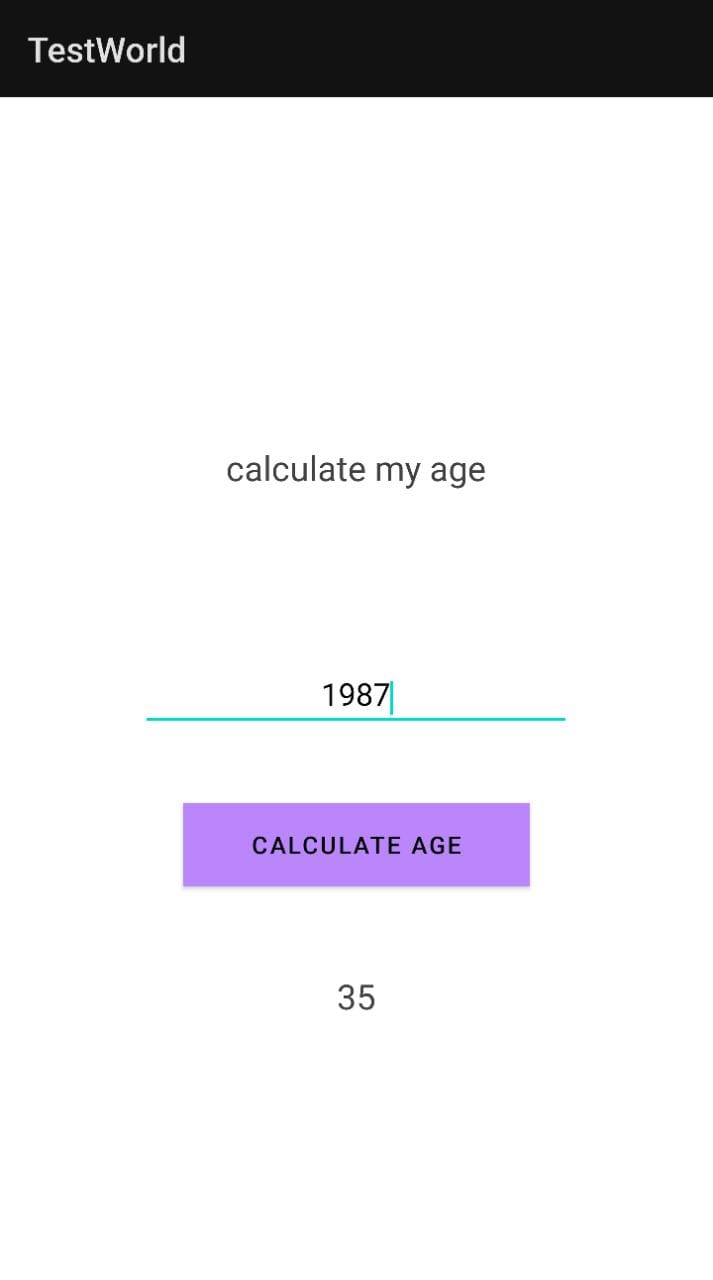
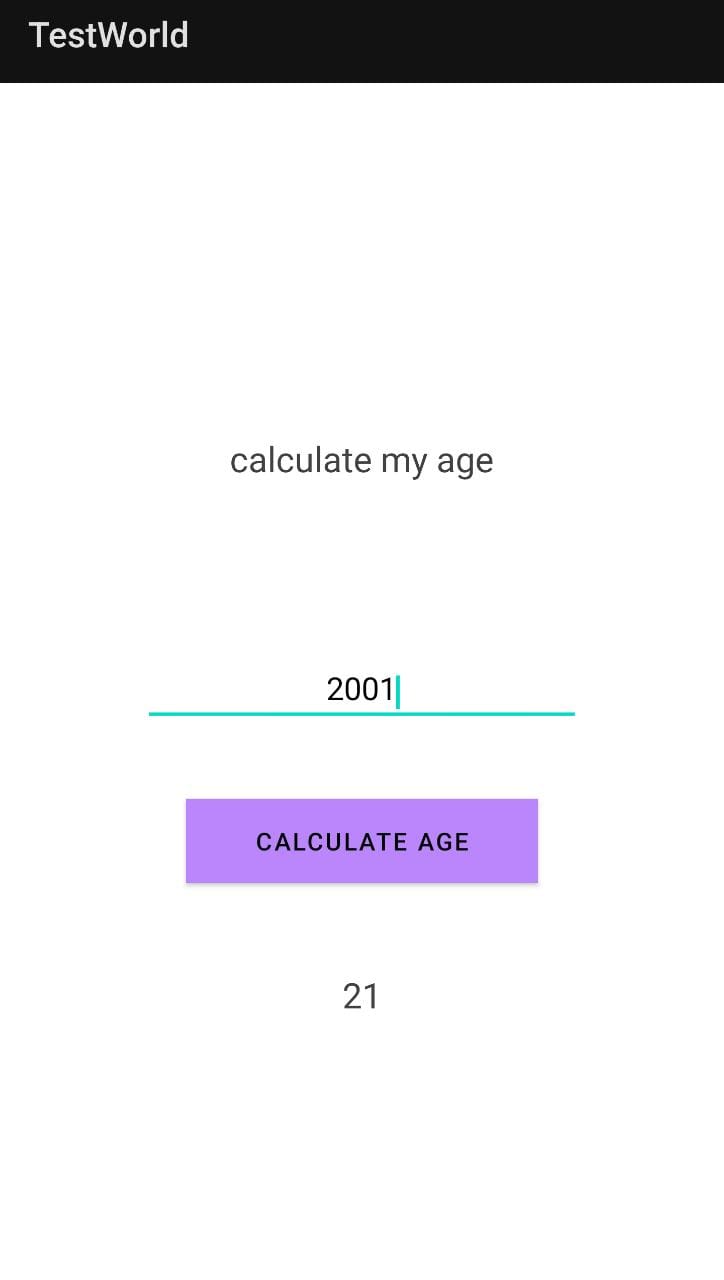
package com.avinash.testworld;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
  
import java.util.Calendar;  
public class MainActivity 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 dobyear = inputValue.getText().toString().trim();  
 int dyear = Integer.*parseInt*(dobyear);  
 int age = years - dyear;  
 if (dobyear.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:**





**Result:**

Implementation of helloworld application is done successfully

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