**TASK NO.1**

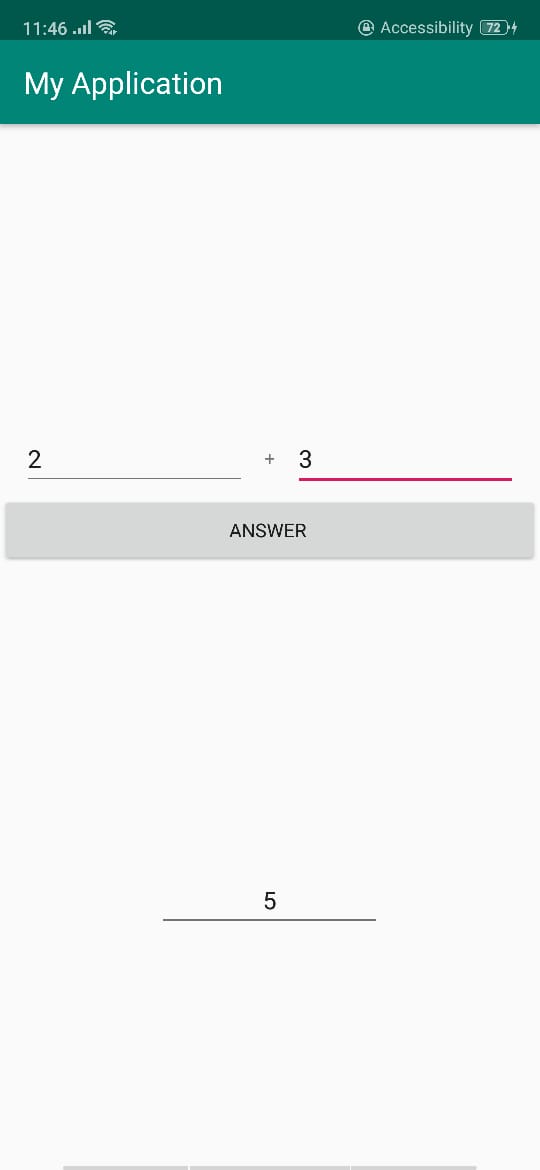
Create an application which can demonstrate all callbacks of a started service.

**Activity\_main.xml:**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:layout\_width="match\_parent"  
 android:orientation="vertical"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAlignment="center"  
 android:paddingTop="200dp"  
 android:layout\_gravity="center|center\_horizontal"  
 >  
 <EditText  
 android:id="@+id/editText2"  
 android:layout\_margin="5px"  
 android:layout\_width="150dp"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="textPersonName" />  
  
   
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="+"  
 android:padding="10dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <EditText  
 android:id="@+id/editText1"  
 android:layout\_margin="5px"  
 android:layout\_width="150dp"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="textPersonName" />  
 </LinearLayout>  
   
 <Button  
 android:id="@+id/button3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Answer "  
   
 />  
  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textAlignment="center"  
 android:paddingTop="200dp"  
 android:layout\_gravity="center|center\_horizontal"  
 >  
 <EditText  
 android:id="@+id/editText5"  
 android:layout\_margin="5px"  
 android:layout\_width="150dp"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:text="5"  
 android:textAlignment="center"  
 android:inputType="textPersonName" />  
  
 </LinearLayout>  
  
</LinearLayout>

**MainActivity.java:**package com.example.lab9;  
  
import android.content.ComponentName;  
import android.content.Context;  
import android.content.Intent;  
import android.content.ServiceConnection;  
import android.os.IBinder;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
import android.widget.TextView;  
import android.widget.Toast;  
  
import com.example.myapplication.R;  
  
public class MainActivity extends AppCompatActivity {  
  
 MyService myservice;  
 boolean bound=false;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 @Override  
 protected void onStart()  
 {  
 super.onStart();  
 Intent i=new Intent(getApplicationContext(),MyService.class);  
 bindService(i,connection, Context.*BIND\_AUTO\_CREATE*);  
 }  
  
 @Override  
 protected void onStop()  
 {  
 super.onStop();  
 if(bound)  
 {  
 unbindService(connection);  
 bound=false;  
 }  
 }  
  
 private ServiceConnection connection=new ServiceConnection()  
 {  
 @Override  
 public void onServiceConnected(ComponentName name, IBinder service) {  
 MyService.LocalBinder binder=(MyService.LocalBinder) service;  
 myservice=binder.getService();  
 bound=true;  
 }  
  
 @Override  
 public void onServiceDisconnected(ComponentName name) {  
 bound=false;  
 }  
 };  
  
 public void calculate(View view)  
 {  
 if(bound)  
 {  
 EditText a=findViewById(R.id.a);  
 EditText b=findViewById(R.id.b);  
 TextView ans=findViewById(R.id.answer);  
 int aa=Integer.*parseInt*(a.getText().toString());  
 int bb=Integer.*parseInt*(b.getText().toString());  
 int num=myservice.calculate(aa,bb);  
 ans.setText(num);  
 Toast.*makeText*(this,num,Toast.*LENGTH\_LONG*).show();  
 }  
 }  
}

**OUTPUT:**

****