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Assignment No. 3

Subject: - [IT31L] Mobile Application Development.

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Assignment: 03

Class : MCA - II
Roll No. : MC21017
Date :

Q1: Write an application to order your favorite food. Provide Checkbox for food item selection.

activity_food_order.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.FoodOrderActivity">

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="30dp">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:padding="10dp"
        android:text="Select Food Menus :"
        android:textColor="@color/purple_500"
        android:textStyle="bold"/>
    <CheckBox
        android:id="@+id/ckbx1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:padding="5dp"
        android:text="Breakfast Menu"/>
    <CheckBox
        android:id="@+id/ckbx2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:padding="5dp"
        android:text="Brunch Menu"/>
    <CheckBox
```

```

        android:id="@+id/ckbx3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:padding="5dp"
        android:text="Luncheon Menu"/>
<CheckBox
    android:id="@+id/ckbx4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:padding="5dp"
    android:text="Dinner Menu"/>
<CheckBox
    android:id="@+id/ckbx5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:padding="5dp"
    android:text="Ethnic Menu"/>
<CheckBox
    android:id="@+id/ckbx6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:padding="5dp"
    android:text="Lounge Menu"/>

<com.google.android.material.button.MaterialButton
    android:id="@+id/btn"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:cornerRadius="100dp"
    android:layout_marginTop="20dp"
    android:paddingTop="15dp"
    android:paddingBottom="15dp"
    android:text="Order Menus" />

<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:padding="10dp"
    android:text="Selected Items :"
    android:textStyle="bold"
    android:textColor="@color/purple_500"
    android:layout_marginTop="10dp"/>
<TextView
    android:id="@+id/tv"
    android:layout_width="match_parent"

```

```
        android:layout_height="wrap_content"
        android:lineHeight="4mm"
        android:hint="No Menu Selected!!!"
        android:textStyle="bold"
        android:textColor="@color/black"
        android:paddingLeft="10dp"
        android:paddingRight="10dp"/>
    </LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

FoodOrderActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;
import com.apaka.akashfulariassignment.*;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.TextView;

public class FoodOrderActivity extends AppCompatActivity implements View.OnClickListener{
    private CheckBox ckbox1,ckbox2,ckbox3,ckbox4,ckbox5,ckbox6;
    private Button btn;
    private TextView tv;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_food_order);
        getSupportActionBar().setTitle("Food Order");
        getSupportActionBar().setSubtitle("Fulari A. K");
        ckbox1 = findViewById(R.id.ckbx1);
        ckbox2 = findViewById(R.id.ckbx2);
        ckbox3 = findViewById(R.id.ckbx3);
        ckbox4 = findViewById(R.id.ckbx4);
        ckbox5 = findViewById(R.id.ckbx5);
        ckbox6 = findViewById(R.id.ckbx6);
        btn = findViewById(R.id.btn);
        tv = findViewById(R.id.tv);

        btn.setOnClickListener(this);
    }

    @Override
```

```
public void onClick(View view) {  
    StringBuilder result = new StringBuilder();  
    if(checkbox1.isChecked())  
        result.append("\n\t "+checkbox1.getText());  
    if(checkbox2.isChecked())  
        result.append("\n\t "+checkbox2.getText());  
    if(checkbox3.isChecked())  
        result.append("\n\t "+checkbox3.getText());  
    if(checkbox4.isChecked())  
        result.append("\n\t "+checkbox4.getText());  
    if(checkbox5.isChecked())  
        result.append("\n\t "+checkbox5.getText());  
    if(checkbox6.isChecked())  
        result.append("\n\t "+checkbox6.getText());  
  
    tv.setText(result.toString());  
}  
}
```

Outputs :



Q 2 : Write an simple android application for radio button.

activity_radio_button.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.RadioButtonActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="30dp">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:paddingTop="10dp"
        android:paddingBottom="10dp"
        android:textSize="24dp"
        android:text="Terms &#38; Conditions"
        android:textColor="@color/purple_500"
        android:textStyle="bold|italic"/>
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="200dp"
        android:scrollbars="vertical"
        android:background="@color/smoke">
        <TextView
            android:id="@+id/termstxt"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:padding="10dp"
            android:lineHeight="4mm"
            android:textColor="@color/black"/>
    </ScrollView>
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:padding="10dp"
        android:text="Do you agree with Privacy &#38; Policy?"
        android:textColor="@color/cardview_dark_background"
        android:textStyle="bold"
```



```
        android:layout_marginTop="10dp"/>
<RadioGroup
    android:id="@+id/pandp"
    android:layout_width="match_parent"
    android:orientation="horizontal"
    android:layout_height="wrap_content">
    <RadioButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Yes"
        android:layout_marginRight="10dp"/>
    <RadioButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="No"/>
</RadioGroup>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:padding="10dp"
    android:text="Do you agree to the terms?"
    android:textColor="@color/cardview_dark_background"
    android:textStyle="bold"/>
<RadioGroup
    android:id="@+id/tandc"
    android:layout_width="match_parent"
    android:orientation="horizontal"
    android:layout_height="wrap_content">
    <RadioButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Agree"
        android:layout_marginRight="10dp"/>
    <RadioButton
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Disagree"/>
</RadioGroup>
<com.google.android.material.button.MaterialButton
    android:id="@+id/btn"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textColor="@color/white"
    android:text="Continue"
    app:cornerRadius="100dp"
    android:paddingTop="15dp"
```

```

        android:paddingBottom="15dp"
        android:layout_marginTop="10dp"
        android:layout_marginBottom="10dp"/>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:padding="10dp"
    android:text="Agreement Status : "
    android:textStyle="bold"
    android:textColor="@color/purple_500"
    android:layout_marginTop="10dp"/>
<TextView
    android:id="@+id/tv"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:lineHeight="4mm"
    android:hint="No Record Found !!!."
    android:textStyle="bold"
    android:textColor="@color/black"
    android:paddingLeft="10dp"
    android:paddingRight="10dp"/>
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

RadioButtonActivity.java

```

package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.TextView;
import android.widget.Toast;

import com.apaka.akashfulariassignment.R;

public class RadioButtonActivity extends AppCompatActivity {
    private static final String TC = "Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod " +
        "tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, " +
        "quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo " +

```

```

        "consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse " +
        "cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non " +
        "proident, sunt in culpa qui officia deserunt mollit anim id est laborum.";
private TextView termstxt,tv;
private RadioGroup pandp,tandc;
private Button btn;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_radio_button);
    getSupportActionBar().setTitle("Radio Button");
    getSupportActionBar().setSubtitle("Fulari A. K");
    tv = findViewById(R.id.tv);
    termstxt = findViewById(R.id.termstxt);
    pandp = findViewById(R.id.pandp);
    tandc = findViewById(R.id.tandc);
    btn = findViewById(R.id.btn);

    termstxt.setText(TC);
    btn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            RadioButton p = findViewById(pandp.getCheckedRadioButtonId());
            RadioButton t = findViewById(tandc.getCheckedRadioButtonId());
            if(p==null){
                Toast.makeText(getApplicationContext(), "Please check Privacy & Policy",
Toast.LENGTH_SHORT).show();
            }
            else if(t==null){
                Toast.makeText(getApplicationContext(), "Please check Terms",
Toast.LENGTH_SHORT).show();
            }
            else {
                tv.setText("\n\tPrivacy & Policy : " + p.getText() + "\n\tTerms & Condition : " +
t.getText());
            }
        }
    });
}
}

```

Outputs :



Terms & Conditions

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Do you agree with Privacy & Policy?

☒ Yes ☐ No

Do you agree to the terms?

☐ Agree ☒ Disagree

CONTINUE

Agreement Status :

No Record Found !!!.



Terms & Conditions

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Do you agree with Privacy & Policy?

☒ Yes ☐ No

Do you agree to the terms?

☒ Agree ☐ Disagree

CONTINUE

Agreement Status :

Privacy & Policy : Yes

Terms & Condition : Agree



Q 3 : Develop an android application to run audio file.

activity_audio.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.AudioActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">
<TextView
    android:id="@+id/ttl"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:paddingTop="5dp"
    android:paddingBottom="5dp"
    android:textColor="@color/black"
    android:background="@color/smoke"
    android:textSize="15dp"
    android:text=""
    android:textAlignment="center"/>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="450dp"
    android:orientation="vertical"
    android:layout_gravity="center"
    android:gravity="center">
<TextView
    android:id="@+id/sttl"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textColor="@color/purple_500"
    android:textSize="13dp"
    android:paddingLeft="25dp"
    android:text="Audio Files"
    android:layout_marginTop="15dp"
    android:layout_marginBottom="15dp"
    android:textStyle="bold"/>
<ListView
    android:id="@+id/listItems"
```

```
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:paddingLeft="10dp"
        android:paddingRight="10dp"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_gravity="center"
    android:gravity="center"
    android:paddingLeft="20dp"
    android:paddingRight="20dp">
    <TextView
        android:id="@+id/live"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="13dp"
        android:textColor="@color/black"
        android:textStyle="bold"
        android:text="00:00"/>
    <SeekBar
        android:id="@+id/progress"
        android:layout_width="wrap_content"
        android:layout_height="40dp"
        android:layout_weight="1"
        android:progress="0"/>
    <TextView
        android:id="@+id/end"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="13dp"
        android:textColor="@color/black"
        android:textStyle="bold"
        android:text="00:00"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_gravity="center"
    android:gravity="center"
    android:padding="20dp">
    <ImageButton
        android:id="@+id/prev"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:src="@drawable/ic_baseline_skip_previous_24"
        app:tint="@color/purple_500"
        android:layout_weight="2"
        android:background="@android:color/transparent"/>
<ImageButton
    android:id="@+id/prev10"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:src="@drawable/ic_baseline_replay_10_24"
    app:tint="@color/purple_500"
    android:layout_weight="2"
    android:background="@android:color/transparent"/>
<ImageButton
    android:id="@+id/player"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@android:color/transparent"
    android:src="@drawable/ic_baseline_play_circle_24"
    android:layout_weight="2"
    app:tint="@color/purple_500" />
<ImageButton
    android:id="@+id/next10"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:src="@drawable/ic_baseline_forward_10_24"
    app:tint="@color/purple_500"
    android:layout_weight="2"
    android:background="@android:color/transparent"/>
<ImageButton
    android:id="@+id/next"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:src="@drawable/ic_baseline_skip_next_24"
    app:tint="@color/purple_500"
    android:layout_weight="2"
    android:background="@android:color/transparent"/>
</LinearLayout>
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

AudioActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

import android.media.MediaPlayer;
import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.ImageButton;
import android.widget.ListView;
import android.widget.SeekBar;
import android.widget.TextView;

import com.apaka.akashfulariassignment.R;

public class AudioActivity extends AppCompatActivity implements View.OnClickListener{
    private TextView ttl, live, end;
    private ImageButton prev, prev10, player, next10, next;
    private MediaPlayer mp;
    private SeekBar SB;
    private ListView LV;
    private Handler handler;
    private int counter = 0;
    private long songDuration = 0;
    private final int[] songs =
    {R.raw.bholenath_shambhu, R.raw.hum_bhagwa_dhari_hai, R.raw.namo_namah_shivaya, R.raw.r
    aghupati_raghav_raja_ram, R.raw.ram_siya_ram};
    private final int[] players =
    {R.drawable.ic_baseline_pause_circle_24, R.drawable.ic_baseline_play_circle_24};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_audio);
        getSupportActionBar().setTitle("Audio Player");
        getSupportActionBar().setSubtitle("Fulari A. K");

        ttl = findViewById(R.id.ttl);
        live = findViewById(R.id.live);
        end = findViewById(R.id.end);
        prev = findViewById(R.id.prev);
        prev10 = findViewById(R.id.prev10);
```



```

player = findViewById(R.id.player);
next10 = findViewById(R.id.next10);
next = findViewById(R.id.next);
SB = findViewById(R.id.progress);
LV = findViewById(R.id.listItems);
handler = new Handler();

initSong(songs[0]);
loadSongs();

prev.setOnClickListener(this);
prev10.setOnClickListener(this);
player.setOnClickListener(this);
next10.setOnClickListener(this);
next.setOnClickListener(this);

mp.setOnCompletionListener(new MediaPlayer.OnCompletionListener() {
    @Override
    public void onCompletion(MediaPlayer mediaPlayer) {
        validatePlayerButton();
    }
});
SB.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
    @Override
    public void onProgressChanged(SeekBar seekBar, int i, boolean b) {}

    @Override
    public void onStartTrackingTouch(SeekBar seekBar) {}

    @Override
    public void onStopTrackingTouch(SeekBar seekBar) {
        int n = seekBar.getProgress();
        if(mp!=null){
            mp.seekTo(n);
            updateSeekTime();

            if(!mp.isPlaying()) {
                mp.start();
                validatePlayerButton();
            }
        }
    }
});
LV.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {

```

```

        playSong(songs[i]);
    }
});
}
@Override
public void onBackPressed() {
    super.onBackPressed();
    if(mp!=null){
        if(mp.isPlaying()) {
            mp.pause();
        }
    }
}
@Override
public void onClick(View view) {
    switch (view.getId()){
        case R.id.player:
            togglePlayer();
            break;
        case R.id.next:
            navigateSong(1);
            break;
        case R.id.prev:
            navigateSong(-1);
            break;
        case R.id.next10:
            navigateSeek(10000);
            break;
        case R.id.prev10:
            navigateSeek(-10000);
            break;
    }
}
public void loadSongs(){
    String[] s = new String[songs.length];
    int i = 0;
    for(int n:songs){ s[i] = getResourceFileName(n); i++;}
    ArrayAdapter<String> adptr = new ArrayAdapter<>(getApplicationContext(),
android.R.layout.simple_list_item_1,s);
    LV.setAdapter(adptr);
}
public void initSong(int song){
    if(mp!=null) {
        if (mp.isPlaying()) {
            mp.stop();
        }
    }
}

```

```

    }
    mp = MediaPlayer.create(getApplicationContext(),song);
    ttl.setText(getResourceFileName(song));
    SB.setMax(mp.getDuration());
    songDuration = mp.getDuration();
    end.setText(longToTime(songDuration));
    updateSeekBar();
}

```

```

public void playSong(int song){
    initSong(song);
    mp.start();
    LV.setSelection(counter);
    validatePlayerButton();
}

```

```

public void navigateSong(int i){
    playSong(getNavigatedSong(i));
}

```

```

public int getNavigatedSong(int i){
    int s = 0,e = songs.length - 1;
    counter += i;

    if (counter < s)
        counter = e;
    else if(counter>e)
        counter = s;
    return songs[counter];
}

```

```

public void navigateSeek(int i){
    if(mp!=null){
        int d = mp.getCurrentPosition();
        mp.seekTo(d+i);
        validatePlayerButton();
        updateSeekBar();
    }
}

```

```

public void togglePlayer(){
    if(mp.isPlaying()) {
        mp.pause();
    }else {
        mp.start();
        updateSeekBar();
    }
}

```

```

    }
    validatePlayerButton();
}

private void updateSeekBar() {
    updateSeekTime();
    SB.setProgress(mp.getCurrentPosition());
    handler.postDelayed(new Runnable() {
        @Override
        public void run() {
            if (mp != null) {
                if (mp.isPlaying()) {
                    updateSeekBar();
                }
            }
        }
    }, 1000);
}

public void updateSeekTime(){
    live.setText( longToTime(mp.getCurrentPosition()) );
}

public void validatePlayerButton(){
    if(mp!=null){
        if(mp.isPlaying()){
            player.setImageDrawable(getDrawable(players[0]));
        }
        else{
            player.setImageDrawable(getDrawable(players[1]));
        }
    }
}

public String longToTime(long n){
    int s = (int) (n / 1000) % 60 ;
    int m = (int) ((n / (1000*60)) % 60);
    int h = (int) ((n / (1000*60*60)) % 24);
    if (h > 0)
        return String.format("%02d:%02d:%02d", h, m, s);
    else
        return String.format("%02d:%02d", m, s);
}

public String getResourceFileName(int id){
    String str = this.getResources().getResourceName(id);

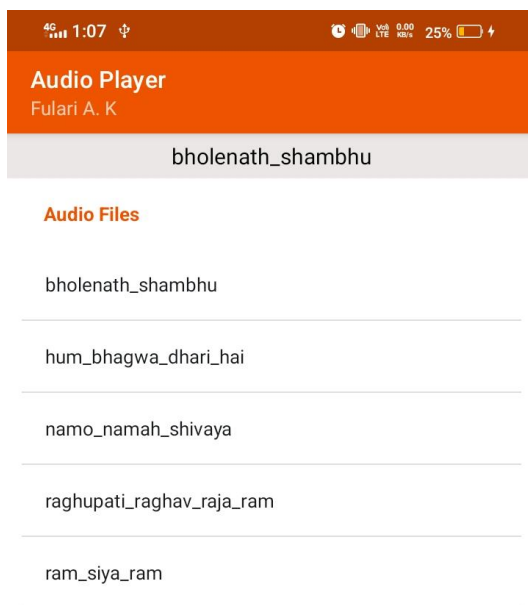
```

```

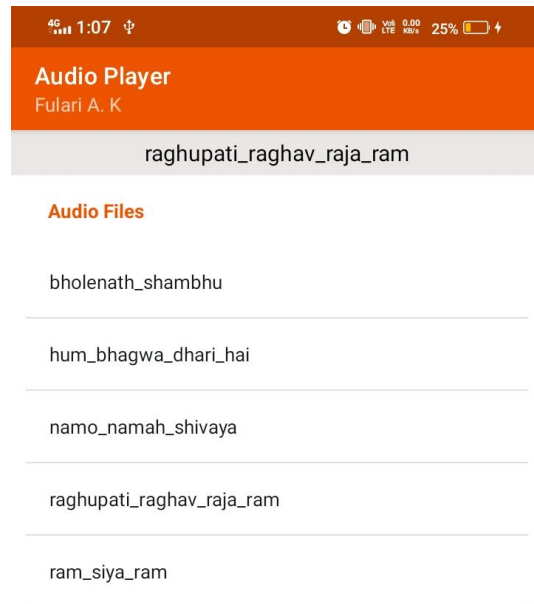
return str.split("/")[1];
}
public int getCurrentSong(){
    return songs[counter];
}
}

```

Outputs :



02:31 ————— 04:02



01:24 ————— 06:54



Q 4 : Develop an android application to run video file.

activity_video.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.VideoActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">
    <TextView
        android:id="@+id/ttl"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:paddingLeft="5dp"
        android:paddingTop="10dp"
        android:paddingBottom="5dp"
        android:textColor="@color/purple_500"
        android:textSize="15dp"
        android:text="File Name"
        android:textAlignment="center"/>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="480dp"
        android:orientation="vertical"
        android:layout_gravity="center"
        android:gravity="center"
        android:background="@color/smoke">
        <VideoView
            android:id="@+id/thumbnail"
            android:layout_width="match_parent"
            android:layout_height="match_parent"/>
    </LinearLayout>
</LinearLayout>
```

```

        android:paddingLeft="20dp"
        android:paddingRight="20dp">
        <TextView
            android:id="@+id/live"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="13dp"
            android:textColor="@color/black"
            android:textStyle="bold"
            android:text="00:00"/>
        <SeekBar
            android:id="@+id/progress"
            android:layout_width="wrap_content"
            android:layout_height="40dp"
            android:layout_weight="1"
            android:progress="0"/>
        <TextView
            android:id="@+id/end"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="13dp"
            android:textColor="@color/black"
            android:textStyle="bold"
            android:text="00:00"/>
    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:layout_gravity="center"
        android:gravity="center"
        android:padding="20dp">
        <ImageButton
            android:id="@+id/prev"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:src="@drawable/ic_baseline_skip_previous_24"
            app:tint="@color/purple_500"
            android:layout_weight="2"
            android:background="@android:color/transparent"/>
        <ImageButton
            android:id="@+id/prev10"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:src="@drawable/ic_baseline_replay_10_24"
            app:tint="@color/purple_500"

```

```
        android:layout_weight="2"
        android:background="@android:color/transparent"/>
<ImageButton
    android:id="@+id/player"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@android:color/transparent"
    android:src="@drawable/ic_baseline_play_circle_24"
    android:layout_weight="2"
    app:tint="@color/purple_500" />
<ImageButton
    android:id="@+id/next10"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:src="@drawable/ic_baseline_forward_10_24"
    app:tint="@color/purple_500"
    android:layout_weight="2"
    android:background="@android:color/transparent"/>
<ImageButton
    android:id="@+id/next"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:src="@drawable/ic_baseline_skip_next_24"
    app:tint="@color/purple_500"
    android:layout_weight="2"
    android:background="@android:color/transparent"/>
</LinearLayout>
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```


VideoActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

import android.media.MediaPlayer;
import android.net.Uri;
import android.os.Bundle;
import android.os.Handler;
import android.util.Log;
import android.view.View;
import android.widget.ImageButton;
import android.widget.SeekBar;
import android.widget.TextView;
import android.widget.VideoView;

import com.apaka.akashfulariassignment.R;

public class VideoActivity extends AppCompatActivity implements View.OnClickListener{
    private TextView ttl, live, end;
    private ImageButton prev, prev10, player, next10, next;
    private VideoView VV;
    private SeekBar SB;
    private Handler handler;
    private int counter = 0;
    private long videoDuration = 0;
    private final int[] videos =
    {R.raw.hanuman_status1, R.raw.hanuman_status2, R.raw.hanuman_status3};
    private final int[] players =
    {R.drawable.ic_baseline_pause_circle_24, R.drawable.ic_baseline_play_circle_24};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_video);
        getSupportActionBar().setTitle("Video Player");
        getSupportActionBar().setSubtitle("Fulari A. K");

        ttl = findViewById(R.id.ttl);
        live = findViewById(R.id.live);
        end = findViewById(R.id.end);
        prev = findViewById(R.id.prev);
        prev10 = findViewById(R.id.prev10);
        player = findViewById(R.id.player);
        next10 = findViewById(R.id.next10);
    }
}
```

```

next = findViewById(R.id.next);
VV = findViewById(R.id.thumbnail);
SB = findViewById(R.id.progress);
handler = new Handler();
initVideo(videos[0]);

prev.setOnClickListener(this);
prev10.setOnClickListener(this);
player.setOnClickListener(this);
next10.setOnClickListener(this);
next.setOnClickListener(this);

VV.setOnCompletionListener(new MediaPlayer.OnCompletionListener() {
    @Override
    public void onCompletion(MediaPlayer mediaPlayer) {
        validatePlayerButton();
    }
});
VV.setOnPreparedListener(new MediaPlayer.OnPreparedListener() {
    @Override
    public void onPrepared(MediaPlayer mediaPlayer) {
        SB.setMax(VV.getDuration());
        videoDuration = VV.getDuration();
        Log.e("ApakaE : ", Long.valueOf(videoDuration).toString());
        end.setText(longToTime(videoDuration));
        updateSeekBar();
    }
});
SB.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {
    @Override
    public void onProgressChanged(SeekBar seekBar, int i, boolean b) {}

    @Override
    public void onStartTrackingTouch(SeekBar seekBar) {}

    @Override
    public void onStopTrackingTouch(SeekBar seekBar) {
        int n = seekBar.getProgress();
        if(VV !=null){
            VV.seekTo(n);
            updateSeekTime();

            if(!VV.isPlaying()) {
                VV.start();
                validatePlayerButton();
            }
        }
    }
});

```

```

        }
    }
});
}

@Override
public void onBackPressed() {
    super.onBackPressed();
    if(VV!=null){
        if(VV.isPlaying()) {
            VV.pause();
        }
    }
}

@Override
public void onClick(View view) {
    switch (view.getId()){
        case R.id.player:
            togglePlayer();
            break;
        case R.id.next:
            navigateVideo(1);
            break;
        case R.id.prev:
            navigateVideo(-1);
            break;
        case R.id.next10:
            navigateSeek(10000);
            break;
        case R.id.prev10:
            navigateSeek(-10000);
            break;
    }
}

public void initVideo(int video){
    if(VV !=null) {
        if (VV.isPlaying()) {
            VV.stopPlayback();
        }
    }
    VV.setVideoURI( Uri.parse("android.resource://" +getPackageName()+ "/" +video) );
    ttl.setText(getResourceFileName(video));
    VV.requestFocus();
}

```

```

public void playVideo(int video){
    initVideo(video);
    VV.start();
    validatePlayerButton();
}

public void navigateVideo(int i){
    playVideo(getNavigatedVideo(i));
}

public int getNavigatedVideo(int i){
    int s = 0,e = videos.length - 1;
    counter += i;

    if (counter < s)
        counter = e;
    else if(counter>e)
        counter = s;
    return videos[counter];
}

public void navigateSeek(int i){
    if(VV !=null){
        int d = VV.getCurrentPosition();
        VV.seekTo(d+i);
        validatePlayerButton();
        updateSeekBar();
    }
}

public void togglePlayer(){
    if(VV.isPlaying()) {
        VV.pause();
    }else {
        VV.start();
        updateSeekBar();
    }
    validatePlayerButton();
}

private void updateSeekBar() {
    updateSeekTime();
    SB.setProgress(VV.getCurrentPosition());
    handler.postDelayed(new Runnable() {
        @Override
        public void run() {

```

```

        if (VV != null) {
            if (VV.isPlaying()) {
                updateSeekBar();
            }
        }
    }, 1000);
}

public void updateSeekTime(){
    live.setText( longToTime(VV.getCurrentPosition()) );
}

public void validatePlayerButton(){
    if(VV !=null){
        if(VV.isPlaying()){
            player.setImageDrawable(getDrawable(players[0]));
        }
        else{
            player.setImageDrawable(getDrawable(players[1]));
        }
    }
}

public String longToTime(long n){
    int s = (int) (n / 1000) % 60 ;
    int m = (int) ((n / (1000*60)) % 60);
    int h  = (int) ((n / (1000*60*60)) % 24);
    if (h > 0)
        return String.format("%02d:%02d:%02d", h, m, s);
    else
        return String.format("%02d:%02d", m, s);
}

public String getResourceFileName(int id){
    String str = this.getResources().getResourceName(id);
    return str.split("/")[1];
}

public int getCurrentSong(){
    return videos[counter];
}
}

```

Outputs :



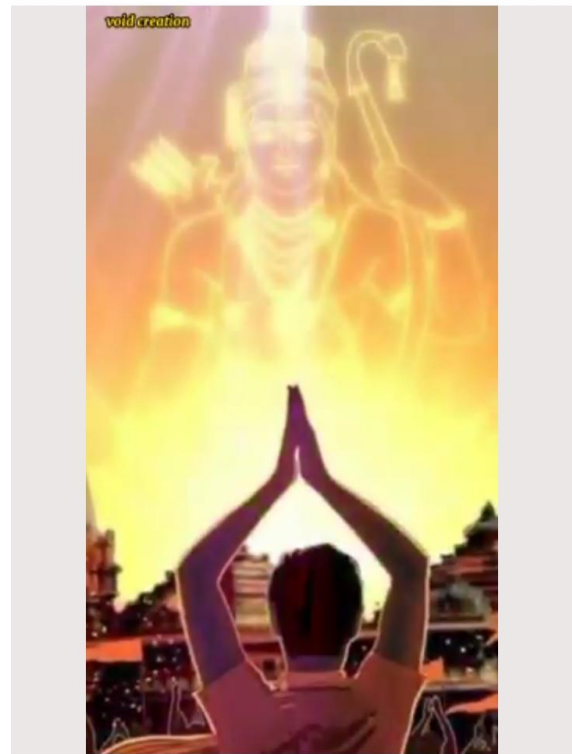
hanuman_status1



00:00 00:30



hanuman_status3



00:11 00:30



Q 5 : Write an application to run spinner.

activity_spinner.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.SpinnerActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:scrollbars="vertical"
    android:padding="20dp">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="15dp"
        android:textColor="@color/purple_500"
        android:text="Validate Voter Details"
        android:textStyle="bold"
        android:textAllCaps="true"
        android:layout_marginBottom="20dp"/>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="15dp"
        android:layout_marginBottom="10dp"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Full Name"
            android:textStyle="bold"
            android:layout_marginBottom="3dp"/>
        <EditText
            android:id="@+id/fname"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="XXX XXX XXX"/>
    </LinearLayout>
</LinearLayout>
```

```
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="5dp"
        android:layout_marginBottom="10dp"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Email ID"
            android:textStyle="bold"
            android:layout_marginBottom="3dp"/>
        <EditText
            android:id="@+id/email"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="XXXXXXXXX@XXX.COM"/>
    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="5dp"
        android:layout_marginBottom="10dp"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Mobile No"
            android:textStyle="bold"
            android:layout_marginBottom="3dp"/>
        <EditText
            android:id="@+id/mno"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="XXXXXXXXXXXX"/>
    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="5dp"
        android:layout_marginBottom="10dp"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Gender"
            android:textStyle="bold"
```



```

        android:layout_marginBottom="3dp"/>
    <Spinner
        android:id="@+id/gend"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="5dp"
    android:layout_marginBottom="10dp"
    android:orientation="vertical">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Age"
        android:textStyle="bold"
        android:layout_marginBottom="3dp"/>
    <Spinner
        android:id="@+id/age"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="5dp"
    android:layout_marginBottom="10dp"
    android:orientation="vertical">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Address"
        android:textStyle="bold"
        android:layout_marginBottom="3dp"/>
    <EditText
        android:id="@+id/address"
        android:layout_width="match_parent"
        android:layout_height="100dp"
        android:inputType="textMultiLine"
    />
</LinearLayout>
<com.google.android.material.button.MaterialButton
    android:id="@+id/btn"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"

```

```

        android:paddingTop="15dp"
        android:paddingBottom="15dp"
        android:textColor="@color/white"
        android:text="Validate Voter"
        app:cornerRadius="100dp"/>
    </LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

SpinnerActivity.java

```

package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;

import com.apaka.akashfulariassignment.R;
import com.google.android.material.button.MaterialButton;

public class SpinnerActivity extends AppCompatActivity {
    private String[] gends = {"Male", "Female", "Other"};
    private String[] ages = getAgeCount(100);
    private Spinner age, gend;
    private EditText fname, email, addr, mno;
    private MaterialButton btn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_spinner);
        getSupportActionBar().setTitle("Spinners");
        getSupportActionBar().setSubtitle("Fulari A. K");
        fname = findViewById(R.id.fname);
        email = findViewById(R.id.email);
        mno = findViewById(R.id.mno);
        gend = findViewById(R.id.gend);
        age = findViewById(R.id.age);
        addr = findViewById(R.id.address);
        btn = findViewById(R.id.btn);

        ArrayAdapter<String> gendsADPT = new ArrayAdapter<String>(this,

```

```

        androidx.appcompat.R.layout.support_simple_spinner_dropdown_item,gends);
        gend.setAdapter(gendsADPT);
        ArrayAdapter<String> ageADPT = new ArrayAdapter<String>(this,
androidx.appcompat.R.layout.support_simple_spinner_dropdown_item,ages);
        age.setAdapter(ageADPT);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int a = Integer.parseInt(ages[age.getSelectedItemId()-1]);
                String fn = fname.getText().toString();
                String em = email.getText().toString();
                String mbl = mno.getText().toString();
                String gd = gends[gend.getSelectedItemId()];
                if(a>=18){
                    AlertDialog.Builder adb = new AlertDialog.Builder(SpinnerActivity.this);
                    adb.setMessage(fn+" You Are Valid For Votting. Your Credentials are :\n Name :
"+fn+"\n Email : "+em+"\n Mobile : "+mbl+"\n Age : "+a+"\n Gender : "+gd);
                    AlertDialog ad = adb.create();
                    ad.show();
                }
                else {
                    Toast.makeText(SpinnerActivity.this, fn + " Is Not Valid For Votting!!!",
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }

    public String[] getAgeCount(int n){
        String[] nums = new String[n];
        for(int i=0;i<n;i++)
            nums[i]= String.valueOf(i+1);
        return nums;
    }
}

```

Outputs :

4G 1:10 0.00 KB/s 25%

Spinners

Fulari A. K

VALIDATE VOTER DETAILS

Full Name
Akash Kallappa Fulari

Email ID
akashfulari31@gmail.com

Mobile No
7887545834

Gender
Male

Age
23

Address
Solapur, Maharashtra - 413216

VALIDATE VOTER

4G 1:10 0.00 KB/s 25%

Spinners

Fulari A. K

VALIDATE VOTER DETAILS

Full Name
Akash Kallappa Fulari

Email ID
akashfulari31@gmail.com

Mobile No

Age
23

Address
Solapur, Maharashtra - 413216

VALIDATE VOTER

Akash Kallappa Fulari You Are Valid For Votting. Your Credentials are :
Name : Akash Kallappa Fulari
Email : akashfulari31@gmail.com
Mobile : 7887545834
Age : 22
Gender : Male

Q 6 : Create an application to provide the rating to your favorite movie.

activity_ratings.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.RatingsActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_gravity="center"
    android:padding="20dp">
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Ratings for Favorite Movie"
    android:textStyle="bold"
    android:textSize="20dp"
    android:textColor="@color/purple_500"
    android:layout_marginTop="20dp"
    android:layout_marginBottom="30dp"
    android:paddingLeft="20dp"/>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical">
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Movie Name"
    android:paddingLeft="20dp"
    android:textStyle="bold|italic"/>
<EditText
    android:id="@+id/movie"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Movie Name here"
    android:textSize="13dp"
    android:layout_marginLeft="20dp"
```

```

        android:layout_marginRight="20dp"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:layout_marginTop="15dp">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Comment"
        android:paddingLeft="20dp"
        android:textStyle="bold|italic"/>
    <EditText
        android:id="@+id/cmt"
        android:layout_width="match_parent"
        android:layout_height="120dp"
        android:hint="Movie Name here"
        android:textSize="13dp"
        android:gravity="top|start"
        android:inputType="textMultiLine"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"/>
</LinearLayout>
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Ratings"
    android:layout_marginTop="20dp"
    android:layout_marginBottom="5dp"
    android:paddingLeft="20dp"
    android:textStyle="bold|italic"/>
<RatingBar
    android:id="@+id/ratingBar"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:isIndicator="false"
    style="@android:style/Widget.DeviceDefault.Light.RatingBar.Indicator"
    android:layout_gravity="left"/>
<com.google.android.material.button.MaterialButton
    android:id="@+id/btn"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:cornerRadius="100dp"
    android:layout_marginTop="20dp"

```

```

        android:paddingTop="15dp"
        android:paddingBottom="15dp"
        android:text="Add Rattings" />
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:padding="10dp"
    android:text="Result :"
    android:textStyle="bold"
    android:textColor="@color/purple_500"
    android:layout_marginTop="10dp"/>
<TextView
    android:id="@+id/rst"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:lineHeight="4mm"
    android:hint="No Data Found !!!."
    android:textStyle="bold"
    android:textColor="@color/black"
    android:paddingLeft="10dp"
    android:paddingRight="10dp"/>
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

RattingsActivity.java

```

package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RatingBar;
import android.widget.TextView;
import com.apaka.akashfulariassignment.R;

public class RattingsActivity extends AppCompatActivity {
    private EditText mv,cmt;
    private RatingBar rb;
    private Button btn;
    private TextView tv;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
    }
}

```

```
setContentView(R.layout.activity_ratings);
getSupportActionBar().setTitle("Star Ratings");
getSupportActionBar().setSubtitle("Fulari A. K");
mv = findViewById(R.id.movie);
cmt= findViewById(R.id.cmt);
rb = findViewById(R.id.ratingBar);
btn = findViewById(R.id.btn);
tv = findViewById(R.id.rst);
btn.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String r = String.valueOf(rb.getRating());
        String m = mv.getText().toString();
        String c = cmt.getText().toString();
        tv.setText("\nMovie Name : "+m+"\nComment : "+c+"\nRatings : "+r);
    }
});
}
```


Outputs :



Rattings for Favorite Movie

Movie Name

The Avatar

Comment

Best Animated movie 🎬🎬🎬.

Rattings



ADD RATTINGS

Result :

No Data Found !!!.



Rattings for Favorite Movie

Movie Name

The Avatar

Comment

Best Animated movie 🎬🎬🎬.

Rattings



ADD RATTINGS

Result :

Movie Name : The Avatar

Comment : Best Animated movie 🎬🎬🎬.

Rattings : 3.5



Q 7 : Create an application to show downloading status for the file with the help of progressbar.

activity_file_download.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.FileDownloadActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:gravity="center"
        android:layout_gravity="center"
        android:padding="20dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Download File From Server"
            android:textStyle="bold"
            android:textSize="20dp"
            android:textColor="@color/purple_500"
            android:layout_marginTop="20dp"
            android:layout_marginBottom="30dp"
            android:paddingLeft="20dp"/>
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical">
            <TextView
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="File URL"
                android:paddingLeft="20dp"
                android:textStyle="bold|italic"/>
            <EditText
                android:id="@+id/url"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:hint="Movie Name here"
                android:text="https://techslides.com/demos/sample-videos/small.mp4"
```

```
        android:textSize="13dp"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"/>
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:layout_marginTop="20dp">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="File Name"
        android:paddingLeft="20dp"
        android:textStyle="bold|italic"/>
    <EditText
        android:id="@+id/file"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter filename"
        android:text="apaka.mp4"
        android:textSize="13dp"
        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"/>
</LinearLayout>
```

```
<LinearLayout
    android:id="@+id/progrssLayout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:visibility="gone">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Download Progress"
        android:paddingLeft="20dp"
        android:textStyle="bold|italic"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="10dp"/>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
```

```

        android:layout_gravity="center"
        android:gravity="center"
        android:paddingLeft="20dp"
        android:paddingRight="20dp">
        <TextView
            android:id="@+id/live"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="0% "
            android:textStyle="bold|italic"/>
        <com.google.android.material.progressindicator.LinearProgressIndicator
            android:id="@+id/progress"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="13dp"
            android:layout_weight="1"
            android:layout_marginLeft="10dp"
            android:layout_marginRight="10dp"/>
        <TextView
            android:id="@+id/end"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="100% "
            android:textStyle="bold|italic" />
    </LinearLayout>
    <TextView
        android:id="@+id/status"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:padding="20dp"
        android:text=""
        android:textStyle="bold"
        android:textColor="@color/purple_500"
        android:layout_marginTop="10dp"/>
</LinearLayout>
<com.google.android.material.button.MaterialButton
    android:id="@+id/btn"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:cornerRadius="100dp"
    android:layout_marginTop="20dp"
    android:paddingTop="15dp"
    android:paddingBottom="15dp"
    android:text="Download Now" />
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

FileDownloadActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

import android.Manifest;
import android.content.Intent;
import android.os.AsyncTask;
import android.os.Build;
import android.os.Bundle;
import android.os.Environment;
import android.os.Handler;
import android.os.Looper;
import android.provider.Settings;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.LinearLayout;
import android.widget.TextView;
import android.widget.Toast;

import com.apaka.akashfulariassignment.R;
import com.google.android.material.progressindicator.LinearProgressIndicator;

import java.io.BufferedInputStream;
import java.io.File;
import java.io.FileOutputStream;
import java.io.InputStream;
import java.io.OutputStream;
import java.net.URL;
import java.net.URLConnection;
import java.util.concurrent.ExecutorService;
import java.util.concurrent.Executors;

public class FileDownloadActivity extends AppCompatActivity {
    private LinearProgressIndicator PB;
    private LinearLayout LL;
    private EditText url,name;
    private Button btn;
    private TextView live,status;
    private int progressBarStatus = 0;
    private Handler progressBarHandler = new Handler();
    private long fileSize = 0;
```

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_file_download);
    getSupportActionBar().setTitle("File Download");
    getSupportActionBar().setSubtitle("Fulari A. K");
    LL = findViewById(R.id.progrssLayout);
    PB = findViewById(R.id.progress);
    name = findViewById(R.id.file);
    url = findViewById(R.id.url);
    btn = findViewById(R.id.btn);
    live = findViewById(R.id.live);
    status = findViewById(R.id.status);
    btn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            String u = url.getText().toString();
            String n = name.getText().toString();
            //DownloadFile d = new DownloadFile();
            //d.execute(u);
            //downloading(u,n);
            download();
        }
    });
}

public void download(){
    //reset progress bar and filesize status
    progressBarStatus = 0;
    fileSize = 0;
    LL.setVisibility(View.VISIBLE);
    status.setText("Wait for load the File Content.");
    new Thread(new Runnable() {
        public void run() {
            while (progressBarStatus < 100) {
                // performing operation
                progressBarStatus++;
                try {
                    Thread.sleep(getRandomNumber(50,1000));
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
                // Updating the progress bar
                progressBarHandler.post(new Runnable() {
                    public void run() {
                        setProcess(progressBarStatus);
                    }
                });
            }
        }
    });
}

```

```

    });
}
// performing operation if file is downloaded,
if (progressBarStatus >= 100) {
    try {
        Thread.sleep(1000);
    } catch (InterruptedException e) {
        e.printStackTrace();
    }
    // close the progress bar dialog
    LL.setVisibility(View.GONE);
    status.setText("File Downloaded Successfully!!!.");
}
}
}).start();
}

private void downloading(String u,String fileName) {
    new Handler().post(new Runnable() {
        int count;
        @Override
        public void run() {
            LL.setVisibility(View.VISIBLE);
            try {
                URL url = new URL(u);
                URLConnection conection = url.openConnection();
                conection.connect();
                int lenghtOfFile = conection.getContentLength();
                InputStream input = conection.getInputStream();
                OutputStream output = new FileOutputStream(new
File(Environment.getExternalStorageDirectory(), fileName));
                byte data[] = new byte[1024];
                long total = 0;
                while ((count = input.read(data)) != -1) {
                    total += count;
                    setProcess(Integer.valueOf("" + (int) ((total * 100) / lenghtOfFile)));
                    output.write(data, 0, count);
                }
                output.flush();
                output.close();
                input.close();
            } catch (Exception e) { e.printStackTrace(); }
            finally { LL.setVisibility(View.GONE); }
        }
    });
}
}

```

```

private class DownloadFile extends AsyncTask<String, Integer, String> {
    @Override
    protected String doInBackground(String... sUrl) {
        return null;
    }

    @Override
    protected void onPostExecute(String s) {
        LL.setVisibility(View.VISIBLE);
        try {
            URL url = new URL(s);
            URLConnection connection = url.openConnection();
            connection.connect();
            int fileLength = connection.getContentLength();
            InputStream input = new BufferedInputStream(url.openStream());
            OutputStream output = new FileOutputStream(new
File(Environment.getExternalStorageDirectory(), url.getFile()));
            byte data[] = new byte[1024];
            long total = 0;
            int count;
            while ((count = input.read(data)) != -1) {
                total += count;
                setProcess((int) (total * 100 / fileLength));
                output.write(data, 0, count);
            }
            output.flush();
            output.close();
            input.close();
        } catch (Exception e) {
            e.printStackTrace();
        } finally {
            LL.setVisibility(View.GONE);
        }
    }
}

public int getRandomNumber(int min, int max) {
    return (int) ((Math.random() * (max - min)) + min);
}

public void setProcess(int n){
    status.setText("Downloading....");
    PB.setProgress(n);
    live.setText(n+"%");
}

}

```


Outputs :



Download File From Server

File URL

<https://techslides.com/demos/sample-videos/small.mp4>

File Name

apaka.mp4

DOWNLOAD NOW

Download File From Server

File URL

<https://techslides.com/demos/sample-videos/small.mp4>

File Name

apaka.mp4

Download Progress

68% 100%

Downloading....

DOWNLOAD NOW



Q 8 : Write a program to create Pop Menu.

activity_popup_menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.PopupMenuActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:layout_gravity="center"
        android:gravity="center"
        android:padding="30dp">

        <com.google.android.material.button.MaterialButton
            android:id="@+id/btn"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            app:cornerRadius="100dp"
            android:layout_marginTop="20dp"
            android:paddingTop="15dp"
            android:paddingBottom="15dp"
            android:text="Click me to open menu" />

    </LinearLayout>

</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

popup_menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:id="@+id/search_item"
        android:title="Search" />
    <item android:id="@+id/upload_item"
        android:title="Upload" />
    <item android:id="@+id/copy_item"
        android:title="Copy" />
    <item android:id="@+id/print_item"
        android:title="Print" />
    <item android:id="@+id/share_item"
        android:title="Share" />
    <item android:id="@+id/bookmark_item"
        android:title="BookMark" />
</menu>
```

PopupMenuActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.PopupMenu;
import android.widget.Toast;
import com.apaka.akashfulariassignment.R;

public class PopupMenuActivity extends AppCompatActivity implements
PopupMenu.OnMenuItemClickListener{

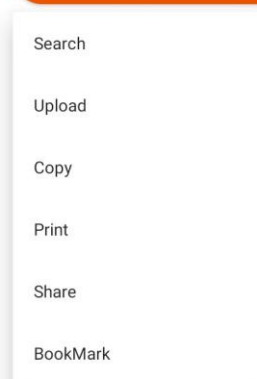
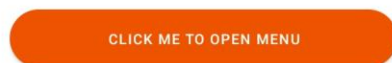
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_popup_menu);
        getSupportActionBar().setTitle("Popup Menu");
        getSupportActionBar().setSubtitle("Fulari A. K");
        Button btn = (Button) findViewById(R.id.btn);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
```

```

        PopupMenu popup = new PopupMenu(PopupMenuActivity.this, v);
        popup.setOnMenuItemClickListener(PopupMenuActivity.this);
        popup.inflate(R.menu.popup_menu);
        popup.show();
    }
});
}
@Override
public boolean onOptionsItemSelected(MenuItem item) {
    Toast.makeText(this, "Selected Item: " + item.getTitle(), Toast.LENGTH_SHORT).show();
    return true;
}
}

```

Outputs :



Q 9 : Write a program to create Option Menu.

activity_option_menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.OptionMenuActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:layout_gravity="center"
    android:gravity="center"
    android:padding="20dp">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Click On Menu Icon at Top Right Corner"
        android:textStyle="bold"
        android:textSize="20dp"
        android:textAlignment="center"/>
    </LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

popup_menu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:id="@+id/search_item"
        android:title="Search" />
    <item android:id="@+id/upload_item"
        android:title="Upload" />
    <item android:id="@+id/copy_item"
        android:title="Copy" />
    <item android:id="@+id/print_item"
        android:title="Print" />
    <item android:id="@+id/share_item"
        android:title="Share" />
    <item android:id="@+id/bookmark_item"
        android:title="BookMark" />
</menu>
```

OptionsMenuActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

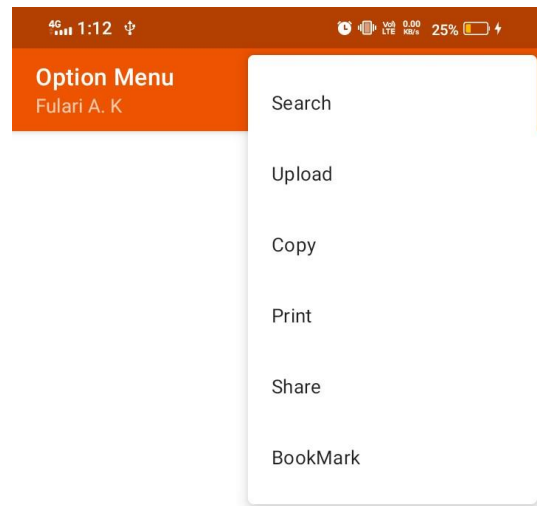
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;
import com.apaka.akashfulariassignment.R;

public class OptionsMenuActivity extends AppCompatActivity{
    private Menu MN;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_option_menu);
        getSupportActionBar().setTitle("Option Menu");
        getSupportActionBar().setSubtitle("Fulari A. K");
    }
    public boolean onCreateOptionsMenu(Menu menu){
        MN = menu;
        getMenuInflater().inflate(R.menu.popup_menu, menu);
        return true;
    }
    public boolean onOptionsItemSelected(MenuItem item){
        String str = item.getTitle().toString();
        Toast.makeText(getApplicationContext(),str,Toast.LENGTH_LONG).show();
        return (super.onOptionsItemSelected(item));
    }
}
```

Outputs :



Click On Menu Icon at Top Right
Corner



Click On Menu Icon at Top Right
Corner



Q 10 : Write an application to create employee database with SQLite. Create table employ info into it. Add Empid, empname, department, salary field into it. Add appropriate data and perform CRUD operations on it.

activity_empcrud.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.EMPCrudActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Employee CRUD Operation"
            android:textColor="@color/black"
            android:layout_marginTop="20dp"
            android:layout_marginBottom="20dp"
            android:textStyle="bold"
            android:textAlignment="center"
            android:textSize="20dp"/>
        <com.google.android.material.button.MaterialButtonToggleGroup
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
            <com.google.android.material.button.MaterialButton
                android:id="@+id/insert"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:backgroundTint="@color/black"
                android:text="Add"/>
            <com.google.android.material.button.MaterialButton
                android:id="@+id/update"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:backgroundTint="@color/black"
                android:text="Update"/>
            <com.google.android.material.button.MaterialButton
                android:id="@+id/delete"
```



```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:backgroundTint="@color/black"
        android:text="Delete"/>
<com.google.android.material.button.MaterialButton
    android:id="@+id/load"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:backgroundTint="@color/black"
    android:text="Load"/>
</com.google.android.material.button.MaterialButtonToggleGroup>
```

```
<ScrollView
    android:id="@+id/insertScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:visibility="gone"
    android:scrollbars="vertical">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Add New Employee"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
        <EditText
            android:id="@+id/insId"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="Enter Employee ID"
            android:layout_marginTop="10dp"
            android:inputType="number"
            android:layout_marginBottom="10dp"/>
        <EditText
            android:id="@+id/insName"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="Enter Employee Name"
            android:layout_marginBottom="10dp"/>
        <EditText
```

```

        android:id="@+id/insDept"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Employee Department"
        android:layout_marginBottom="10dp"/>
    <EditText
        android:id="@+id/insSal"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Employee Salary"
        android:inputType="numberDecimal"
        android:layout_marginBottom="10dp"/>
    <com.google.android.material.button.MaterialButton
        android:id="@+id/insNow"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:cornerRadius="100dp"
        android:text="Insert Record Now"
        android:layout_marginBottom="5dp"/>
</LinearLayout>
</ScrollView>
<ScrollView
    android:id="@+id/updateScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Update Employee Record"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
        <Spinner
            android:id="@+id/listEmps"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="5dp"
            android:padding="10dp"/>
        <EditText

```

```

        android:id="@+id/updtId"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Employee ID"
        android:layout_marginTop="5dp"
        android:inputType="number"
        android:layout_marginBottom="10dp"/>
    <EditText
        android:id="@+id/updtName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Employee Name"
        android:layout_marginBottom="10dp"/>
    <EditText
        android:id="@+id/updtDept"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Employee Department"
        android:layout_marginBottom="10dp"/>
    <EditText
        android:id="@+id/updtSal"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Employee Salary"
        android:inputType="numberDecimal"
        android:layout_marginBottom="10dp"/>
    <com.google.android.material.button.MaterialButton
        android:id="@+id/updtNow"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:cornerRadius="100dp"
        android:text="Update Record"
        android:layout_marginBottom="5dp"/>
</LinearLayout>
</ScrollView>
<ScrollView
    android:id="@+id/deleteScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView

```

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Delete Employee Record"
        android:textColor="@color/purple_500"
        android:layout_marginBottom="15dp"
        android:textStyle="bold"
        android:textSize="13dp"/>
<EditText
    android:id="@+id/deId"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter Employee ID"
    android:layout_marginTop="10dp"
    android:inputType="number"
    android:layout_marginBottom="10dp"/>
<com.google.android.material.button.MaterialButton
    android:id="@+id/deNow"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:cornerRadius="100dp"
    android:text="Delete Record"
    android:layout_marginBottom="5dp"/>
</LinearLayout>
</ScrollView>
<ScrollView
    android:id="@+id/loadScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical"
    android:layout_marginTop="30dp">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Employee Records"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
        <TextView
            android:id="@+id/tvList"
            android:layout_width="match_parent"

```

```

        android:lineHeight="25dp"
        android:layout_height="match_parent"/>
    </LinearLayout>
</ScrollView>
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

EmpDBHandler.java

```

package com.apaka.akashfulariassignment.assignment3;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import java.util.ArrayList;
import java.util.HashMap;

public class EmpDBHandler extends SQLiteOpenHelper {
    private static final int DBVersion = 1;
    private static final String DBNAME = "Employee",
        TBLNAME = "Employ_info",
        empId = "id",
        empName = "empname",
        empDept = "empdept",
        empSal = "empsal";

    private SQLiteDatabase db;
    private String query = "";

    EmpDBHandler(Context ctx) throws Exception{
        super(ctx,DBNAME,null,DBVersion);
    }

    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {
        db = sqLiteDatabase;
        query = "CREATE TABLE "+TBLNAME+" (" +empId+" INTEGER PRIMAERY KEY AUTOINCREAMENT, "+empName+" TEXT, "+empDept+" TEXT, "+empSal+" TEXT)";
        exeQuery();
    }

    public boolean insertData(String id,String name,String dept,String sal){
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues cv = new ContentValues();
        cv.put(empId,id);
        cv.put(empName,name);
    }

```

```

        cv.put(empDept,dept);
        cv.put(empSal,sal);
        return db.insert(TBLNAME,null,cv)>0;
    }
    public boolean updateData(String id,String name,String dept,String sal){
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues cv = new ContentValues();
        cv.put(empId,id);
        cv.put(empName,name);
        cv.put(empDept,dept);
        cv.put(empSal,sal);
        return db.update(TBLNAME,cv,empId+"="+id,null)>0;
    }
    public boolean deleteData(int ID){
        String qr = "Select * From "+TBLNAME+" where "+empId+"='"+String.valueOf(ID)+"'";
        if(isExists(qr)){
            db.delete(TBLNAME,empId+"=?",new String[]{ String.valueOf(ID) });
            return true;
        }
        else {
            return false;
        }
    }
    public String loadData(){
        String str = "";
        db = getWDB();
        Cursor cr = db.rawQuery("SELECT * From "+TBLNAME,null);
        while(cr.moveToNext()){
            str += "ID: " + cr.getString(0);
            str += "\tName: " + cr.getString(1);
            str += "\tDepartment: " + cr.getString(2);
            str += "\tSalary: " + cr.getString(3);
            str += "\n";
        }
        return str;
    }
}

```

EMPCrudActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;
import android.content.ContentValues;
import android.os.Bundle;
import android.util.Log;
import android.view.KeyEvent;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.EditText;
import android.widget.ListView;
import android.widget.ScrollView;
import android.widget.Spinner;
import android.widget.TextView;
import android.widget.Toast;
import com.apaka.akashfulariassignment.R;
import com.google.android.material.button.MaterialButton;
import java.util.ArrayList;
import java.util.Arrays;
import java.util.HashMap;

public class EMPCrudActivity extends AppCompatActivity implements View.OnClickListener{
    private ScrollView insScroll, updtScroll, delScroll, lodScroll;
    private MaterialButton insBtn, insNow, updtBtn, updtNow, delBtn, delNow, lodBtn;
    private Spinner listEmps;
    private EmpDBHandler DB;
    private TextView TV;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_empcrud);
        getSupportActionBar().setTitle("EMP-CRUD");
        getSupportActionBar().setSubtitle("Fulari A. K");
        try {
            DB = new EmpDBHandler(getApplicationContext());
        } catch (Exception e) {
            e.printStackTrace();
        }
        TV = findViewById(R.id.tvList);
        listEmps = findViewById(R.id.listEmps);
        loadEmps();
    }
}
```

```

insScroll = findViewById(R.id.insertScroll);
updtScroll = findViewById(R.id.updateScroll);
delScroll = findViewById(R.id.deleteScroll);
lodScroll = findViewById(R.id.loadScroll);

insBtn = findViewById(R.id.insert);
insNow = findViewById(R.id.insNow);
updtBtn = findViewById(R.id.update);
updtNow = findViewById(R.id.updtNow);
delBtn = findViewById(R.id.delete);
delNow = findViewById(R.id.delNow);
lodBtn = findViewById(R.id.load);

insBtn.setOnClickListener(this);
insNow.setOnClickListener(this);
updtBtn.setOnClickListener(this);
updtNow.setOnClickListener(this);
delBtn.setOnClickListener(this);
delNow.setOnClickListener(this);
lodBtn.setOnClickListener(this);

loadRecords();

listEmps.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l){
        String sid = listEmps.getItemAtPosition(i).toString();
        int id = Integer.parseInt(sid);
        HashMap<String, String> emp = DB.loadDataById(id);
        EditText utid = findViewById(R.id.updtId),
            utname = findViewById(R.id.updtName),
            utdept = findViewById(R.id.updtDept),
            utsal = findViewById(R.id.updtSal);

        utid.setText(emp.get("id"));
        utname.setText(emp.get("name"));
        utdept.setText(emp.get("dept"));
        utsal.setText(emp.get("sal"));
    }
    @Override
    public void onNothingSelected(AdapterView<?> adapterView) {}
});
}

@Override

```



```

public void onClick(View view) {
    switch(view.getId()){
        case R.id.insert:
            openView(1);
            break;
        case R.id.insNow:
            EditText itid = findViewById(R.id.insId),
                itname = findViewById(R.id.insName),
                itdept = findViewById(R.id.insDept),
                itsal = findViewById(R.id.insSal);
            String ieid = itid.getText().toString(),
                iename = itname.getText().toString(),
                ieddept = itdept.getText().toString(),
                iesal = itsal.getText().toString();
            if(ieid.isEmpty() || iename.isEmpty() || ieddept.isEmpty() || iesal.isEmpty()){
                Toast.makeText(getApplicationContext(), "All fields are Mandatory!!!",
Toast.LENGTH_SHORT).show();
            }
            else {
                if(DB.insertData(ieid,iename,ieddept,iesal)) {
                    Toast.makeText(getApplicationContext(), "Employee Record Added
Successfully!!!", Toast.LENGTH_SHORT).show();
                    loadRecords();
                }
                else{
                    Toast.makeText(getApplicationContext(), "Sorry, Something went wrong
Record Added Successfully!!!", Toast.LENGTH_SHORT).show();
                }
            }
            break;
        case R.id.update:
            openView(2);
            break;
        case R.id.updtNow:
            EditText utid = findViewById(R.id.updtId),
                utname = findViewById(R.id.updtName),
                utdept = findViewById(R.id.updtDept),
                utsal = findViewById(R.id.updtSal);
            String ueid = utid.getText().toString(),
                uename = utname.getText().toString(),
                ueddept = utdept.getText().toString(),
                uesal = utsal.getText().toString();
            if(ueid.isEmpty() || uename.isEmpty() || ueddept.isEmpty() || uesal.isEmpty()){
                Toast.makeText(getApplicationContext(), "All fields are Mandatory!!!",
Toast.LENGTH_SHORT).show();
            }
    }
}

```

```

    }
    else {
        if(DB.updateData(ueid, uename, uedep, uesal)) {
            Toast.makeText(getApplicationContext(), "Employee Record Updated
Successfully!!!.", Toast.LENGTH_SHORT).show();
            loadRecords();
        }else{
            Toast.makeText(getApplicationContext(), "Sorry, Something went wrong
Record Updated!!!.", Toast.LENGTH_SHORT).show();
        }
    }
    break;
case R.id.delete:
    openView(3);
    break;
case R.id.delNow:
    EditText dtid = findViewById(R.id.delId);
    int deid = Integer.parseInt(dtid.getText().toString());
    if(DB.deleteData(deid)){
        Toast.makeText(getApplicationContext(), "Record Deleted Successfully!!!.",
Toast.LENGTH_SHORT).show();
        loadRecords();
    }else{
        Toast.makeText(getApplicationContext(), "Sorry, Something went wrong Record
Deleted!!!.", Toast.LENGTH_SHORT).show();
    }
    break;
case R.id.load:
    loadRecords();
    break;
default:
    Log.d("onClick-Invalid", "Invalid Button Id");
}
}

public void loadRecords(){
    loadEmps();
    String data = DB.loadData();
    if(data.isEmpty())
        data="No Records Found!!!.";
    setTV(data);
    openView(4);
}

public void loadEmps(){
    ArrayList<String> sarray = DB.loadDataOnly(0);
    String[] str = sarray.toArray(new String[sarray.size()]);

```

```
        ArrayAdapter<String> adptr = new ArrayAdapter<String>(this,
androidx.appcompat.R.layout.support_simple_spinner_dropdown_item, str);
        adptr.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        listEmps.setAdapter(adptr);
    }
    public void setTV(String str){
        TV.setText(str);
    }
    public void openView(int i){
        insScroll.setVisibility(View.GONE);
        updtScroll.setVisibility(View.GONE);
        delScroll.setVisibility(View.GONE);
        lodScroll.setVisibility(View.GONE);
        switch (i){
            case 1:
                insScroll.setVisibility(View.VISIBLE);
                break;
            case 2:
                updtScroll.setVisibility(View.VISIBLE);
                break;
            case 3:
                delScroll.setVisibility(View.VISIBLE);
                break;
            case 4:
                lodScroll.setVisibility(View.VISIBLE);
                break;
        }
    }
}
```

Outputs :



Employee CRUD Operation



Add New Employee

5

Prakash K. Fulari

MCA

540000

INSERT RECORD NOW



Employee CRUD Operation



Employee Records

ID: 1 Name: Akash K. Fulari Department: MCA Salary: 45000

ID: 2 Name: Ambarish K. Fulari Department: BCA Salary: 68000

ID: 3 Name: Rohit N. Karale Department: MCA Salary: 31584

ID: 4 Name: Rohit Kawale Department: MCA Salary: 40000

ID: 5 Name: Prakash K. Fulari Department: MCA Salary: 540000



Employee CRUD Operation

ADDUPDATEDELETELOAD

Update Employee Record

4

▼

4

Rohit D. Kawale

MCA

40000

UPDATE RECORD



Employee CRUD Operation

ADDUPDATEDELETELOAD

Employee Records

ID: 1 Name: Akash K. Fulari Department: MCA Salary: 45000

ID: 2 Name: Ambarish K. Fulari Department: BCA Salary: 68000

ID: 3 Name: Rohit N. Karale Department: MCA Salary: 31584

ID: 4 Name: Rohit D. Kawale Department: MCA Salary: 40000

ID: 5 Name: Prakash K. Fulari Department: MCA Salary: 540000



Employee CRUD Operation

ADD UPDATE DELETE LOAD

Delete Employee Record

3

DELETE RECORD



Employee CRUD Operation

ADD UPDATE DELETE LOAD

Employee Records

ID: 1 Name: Akash K. Fulari Department: MCA Salary: 45000

ID: 2 Name: Ambarish K. Fulari Department: BCA Salary:
68000

ID: 4 Name: Rohit D. Kawale Department: MCA Salary:
40000

ID: 5 Name: Prakash K. Fulari Department: MCA Salary:
540000



Q 11 : Write an android application for book management system using SQLite to create table Book and perform CRUD operations (perform ADD, UPDATE, DELETE and READ operations)

activity_book_crud.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.BookCrudActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Book CRUD Operation"
            android:textColor="@color/black"
            android:layout_marginTop="20dp"
            android:layout_marginBottom="20dp"
            android:textStyle="bold"
            android:textAlignment="center"
            android:textSize="20dp"/>
        <com.google.android.material.button.MaterialButtonToggleGroup
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
            <com.google.android.material.button.MaterialButton
                android:id="@+id/insert"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:backgroundTint="@color/black"
                android:text="Add"/>
            <com.google.android.material.button.MaterialButton
                android:id="@+id/update"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:backgroundTint="@color/black"
                android:text="Update"/>
            <com.google.android.material.button.MaterialButton
                android:id="@+id/delete"
```

```

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:backgroundTint="@color/black"
        android:text="Delete"/>
<com.google.android.material.button.MaterialButton
    android:id="@+id/load"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:backgroundTint="@color/black"
    android:text="Load"/>
</com.google.android.material.button.MaterialButtonToggleGroup>
<ScrollView
    android:id="@+id/insertScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Add New Book"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
        <EditText
            android:id="@+id/insId"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="Enter Book ID"
            android:layout_marginTop="10dp"
            android:inputType="number"
            android:layout_marginBottom="10dp"/>
        <EditText
            android:id="@+id/insName"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="Enter Book Name"
            android:layout_marginBottom="10dp"/>
        <EditText
            android:id="@+id/insAuth"
            android:layout_width="match_parent"

```



```

        android:layout_height="wrap_content"
        android:hint="Enter Book Author"
        android:layout_marginBottom="10dp"/>
    <EditText
        android:id="@+id/insPrice"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Book Price"
        android:inputType="numberDecimal"
        android:layout_marginBottom="10dp"/>
    <com.google.android.material.button.MaterialButton
        android:id="@+id/insNow"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:cornerRadius="100dp"
        android:text="Add New Book"
        android:layout_marginBottom="5dp"/>
</LinearLayout>
</ScrollView>
<ScrollView
    android:id="@+id/updateScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Update Book Record"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
        <Spinner
            android:id="@+id/listBooks"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="5dp"
            android:padding="10dp"/>
        <EditText
            android:id="@+id/updtId"
            android:layout_width="match_parent"

```

```

        android:layout_height="wrap_content"
        android:hint="Enter Book ID"
        android:layout_marginTop="5dp"
        android:inputType="number"
        android:layout_marginBottom="10dp"/>
<EditText
    android:id="@+id/updtName"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter Book Name"
    android:layout_marginBottom="10dp"/>
<EditText
    android:id="@+id/updtAuth"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter Book Author"
    android:layout_marginBottom="10dp"/>
<EditText
    android:id="@+id/updtPrice"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter Book Price"
    android:inputType="numberDecimal"
    android:layout_marginBottom="10dp"/>
<com.google.android.material.button.MaterialButton
    android:id="@+id/updtNow"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:cornerRadius="100dp"
    android:text="Update Record"
    android:layout_marginBottom="5dp"/>
</LinearLayout>
</ScrollView>
<ScrollView
    android:id="@+id/deleteScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"

```

```

        android:text="Delete Book Record"
        android:textColor="@color/purple_500"
        android:layout_marginBottom="15dp"
        android:textStyle="bold"
        android:textSize="13dp"/>
<EditText
    android:id="@+id/delId"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter Book ID"
    android:layout_marginTop="10dp"
    android:inputType="number"
    android:layout_marginBottom="10dp"/>
<com.google.android.material.button.MaterialButton
    android:id="@+id/delNow"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:cornerRadius="100dp"
    android:text="Delete Record"
    android:layout_marginBottom="5dp"/>
</LinearLayout>
</ScrollView>
<ScrollView
    android:id="@+id/loadScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical"
    android:layout_marginTop="30dp">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Book Records"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
        <TextView
            android:id="@+id/tvList"
            android:layout_width="match_parent"
            android:lineHeight="25dp"
            android:layout_height="match_parent"/>

```

```
        </LinearLayout>
    </ScrollView>
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

BookDBHandler.java

```
package com.apaka.akashfulariassignment.assignment3;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import java.util.ArrayList;
import java.util.HashMap;

public class BookDBHandler extends SQLiteOpenHelper {
    private static final int DBVersion = 1;
    private static final String DBNAME = "BookStore",
        TBLNAME = "Book",
        bookId = "id",
        bookName = "bookname",
        bookAuthor = "authtor",
        bookPrice = "price";

    private SQLiteDatabase db;
    private String query = "";

    BookDBHandler(Context ctx) throws Exception{
        super(ctx,DBNAME,null,DBVersion);
    }
    @Override
    public void onCreate(SQLiteDatabase sqLiteDatabase) {
        db = sqLiteDatabase;
        query = "CREATE TABLE "+TBLNAME+" (" + bookId + " INTEGER PRIMAERY KEY AUTOINCREAMENT, "+ bookName + " TEXT, "+ bookAuthor + " TEXT, "+ bookPrice + " TEXT)";
        exeQuery();
    }
    public boolean insertData(String id,String name,String author,String price){
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues cv = new ContentValues();
        cv.put(bookId,id);
        cv.put(bookName,name);
        cv.put(bookAuthor,author);
        cv.put(bookPrice,price);
```

```

        return db.insert(TBLNAME,null,cv)>0;
    }
    public boolean updateData(String id,String name,String author,String price){
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues cv = new ContentValues();
        cv.put(bookId,id);
        cv.put(bookName,name);
        cv.put(bookAuthor,author);
        cv.put(bookPrice,price);
        return db.update(TBLNAME,cv, bookId +"="+id,null)>0;
    }
    public boolean deleteData(int ID){
        String qr = "Select * From "+TBLNAME+" where "+ bookId +"="+String.valueOf(ID)+"";
        if(isExists(qr)){
            db.delete(TBLNAME, bookId +"=?",new String[]{ String.valueOf(ID) });
            return true;
        }
        else {
            return false;
        }
    }
    public String loadData(){
        String str = "";
        db = getWDB();
        Cursor cr = db.rawQuery("SELECT * From "+TBLNAME,null);
        while(cr.moveToNext()){
            str += "ID: " + cr.getString(0);
            str += "\tName: " + cr.getString(1);
            str += "\tAuthor: " + cr.getString(2);
            str += "\tPrice: " + cr.getString(3);
            str += "\n";
        }
        return str;
    }
    public ArrayList<String> loadDataOnly(int i){
        db = getWDB();
        Cursor cr = db.rawQuery("SELECT * From "+TBLNAME,null);
        ArrayList<String> str = new ArrayList<String>();
        int j = 0;
        while(cr.moveToNext()){
            if(i==0)
                str.add(cr.getString(0));
            else if(i==1)
                str.add(cr.getString(1));
            else if(i==2)
                str.add(cr.getString(2));

```

```

        else if(i==3)
            str.add(cr.getString(3));
    }
    return str;
}

public HashMap<String,String> loadDataById(int id){
    db = getWDB();
    Cursor cr = db.rawQuery("SELECT * From "+TBLNAME+" WHERE "+ bookId +"="+id+"
",null);
    HashMap<String,String> emp = new HashMap<>();
    while(cr.moveToNext()){
        emp.put("id",cr.getString(0));
        emp.put("name",cr.getString(1));
        emp.put("author",cr.getString(2));
        emp.put("price",cr.getString(3));
    }
    return emp;
}

public boolean isExists(String qr){
    db = getWDB();
    Cursor cr = db.rawQuery(qr,null);
    if(cr.moveToFirst())
        return true;
    else
        return false;
}

private SQLiteDatabase getWDB(){
    return this.getWritableDatabase();
}

private SQLiteDatabase getRDB(){
    return this.getReadableDatabase();
}

private void exeQuery(){
    db.execSQL(query);
    query = "";
}

@Override
public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {
    query = "DROP TABLE IF EXISTS "+TBLNAME;
    exeQuery();
    onCreate(sqLiteDatabase);
}
}

```

BookCrudActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.EditText;
import android.widget.ScrollView;
import android.widget.Spinner;
import android.widget.TextView;
import android.widget.Toast;

import com.apaka.akashfulariassignment.R;
import com.google.android.material.button.MaterialButton;

import java.util.ArrayList;
import java.util.HashMap;

public class BookCrudActivity extends AppCompatActivity implements AdapterView.OnItemClickListener{
    private ScrollView insScroll, updtScroll, delScroll, lodScroll;
    private MaterialButton insBtn, insNow, updtBtn, updtNow, delBtn, delNow, lodBtn;
    private Spinner listBooks;
    private BookDBHandler DB;
    private TextView TV;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_book_crud);
        getSupportActionBar().setTitle("Book-CRUD");
        getSupportActionBar().setSubtitle("Fulari A. K");
        try {
            DB = new BookDBHandler(getApplicationContext());
        } catch (Exception e) {
            e.printStackTrace();
        }

        TV = findViewById(R.id.tvList);
        listBooks = findViewById(R.id.listBooks);
        loadBooks();
        insScroll = findViewById(R.id.insertScroll);
```

```

updtScroll = findViewById(R.id.updateScroll);
delScroll = findViewById(R.id.deleteScroll);
lodScroll = findViewById(R.id.loadScroll);

insBtn = findViewById(R.id.insert);
insNow = findViewById(R.id.insNow);
updtBtn = findViewById(R.id.update);
updtNow = findViewById(R.id.updtNow);
delBtn = findViewById(R.id.delete);
delNow = findViewById(R.id.delNow);
lodBtn = findViewById(R.id.load);

insBtn.setOnClickListener(this);
insNow.setOnClickListener(this);
updtBtn.setOnClickListener(this);
updtNow.setOnClickListener(this);
delBtn.setOnClickListener(this);
delNow.setOnClickListener(this);
lodBtn.setOnClickListener(this);

loadRecords();

listBooks.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l){
        String sid = listBooks.getItemAtPosition(i).toString();
        int id = Integer.parseInt(sid);
        HashMap<String, String> emp = DB.loadDataById(id);
        EditText utid = findViewById(R.id.updtId),
            utname = findViewById(R.id.updtName),
            utauth = findViewById(R.id.updtAuth),
            utprice = findViewById(R.id.updtPrice);
        utid.setText(emp.get("id"));
        utname.setText(emp.get("name"));
        utauth.setText(emp.get("author"));
        utprice.setText(emp.get("price"));
    }
    @Override
    public void onNothingSelected(AdapterView<?> adapterView) {}
});
}
@Override
public void onClick(View view) {
    switch(view.getId()){
        case R.id.insert:
            openView(1);

```



```

        break;
    case R.id.insNow:
        EditText itid = findViewById(R.id.insId),
            itname = findViewById(R.id.insName),
            itauth = findViewById(R.id.insAuth),
            itprice = findViewById(R.id.insPrice);
        String ibid = itid.getText().toString(),
            ibname = itname.getText().toString(),
            ibauth = itauth.getText().toString(),
            ibprice = itprice.getText().toString();
        if(ibid.isEmpty() || ibname.isEmpty() || ibauth.isEmpty() || ibprice.isEmpty()){
            Toast.makeText(getApplicationContext(), "All fields are Mandatory!!!",
Toast.LENGTH_SHORT).show();
        }
        else {
            if(DB.insertData(ibid,ibname,ibauth,ibprice)) {
                Toast.makeText(getApplicationContext(), "Book Record Added Successfully!!!",
Toast.LENGTH_SHORT).show();
                loadRecords();
            }
            else{
                Toast.makeText(getApplicationContext(), "Sorry, Something went wrong Record
Added Successfully!!!", Toast.LENGTH_SHORT).show();
            }
        }
        break;
    case R.id.update:
        openView(2);
        break;
    case R.id.updtNow:
        EditText utid = findViewById(R.id.updtId),
            utname = findViewById(R.id.updtName),
            utauth = findViewById(R.id.updtAuth),
            utprice = findViewById(R.id.updtPrice);
        String ubid = utid.getText().toString(),
            ubname = utname.getText().toString(),
            ubauth = utauth.getText().toString(),
            ubprice = utprice.getText().toString();
        if(ubid.isEmpty() || ubname.isEmpty() || ubauth.isEmpty() || ubprice.isEmpty()){
            Toast.makeText(getApplicationContext(), "All fields are Mandatory!!!",
Toast.LENGTH_SHORT).show();
        }
        else {
            if(DB.updateData(ubid,ubname,ubauth,ubprice)) {
                Toast.makeText(getApplicationContext(), "Book Record Updated
Successfully!!!", Toast.LENGTH_SHORT).show();

```

```

        loadRecords();
    }else{
        Toast.makeText(getApplicationContext(), "Sorry, Something went wrong Record
Updated!!!", Toast.LENGTH_SHORT).show();
    }
}
break;
case R.id.delete:
    openView(3);
    break;
case R.id.delNow:
    EditText dtid = findViewById(R.id.delId);
    int deid = Integer.parseInt(dtid.getText().toString());
    if(DB.deleteData(deid)){
        Toast.makeText(getApplicationContext(), "Record Deleted Successfully!!!",
Toast.LENGTH_SHORT).show();
        loadRecords();
    }else{
        Toast.makeText(getApplicationContext(), "Sorry, Something went wrong Record
Deleted!!!", Toast.LENGTH_SHORT).show();
    }
    break;
case R.id.load:
    loadRecords();
    break;
default:
    Log.d("onClick-Invalid", "Invalid Button Id");
}
}

public void loadRecords(){
    loadBooks();
    String data = DB.loadData();
    if(data.isEmpty())
        data="No Records Found!!!";
    setTV(data);
    openView(4);
}

public void loadBooks(){
    ArrayList<String> sarray = DB.loadDataOnly(0);
    String[] str = sarray.toArray(new String[sarray.size()]);
    ArrayAdapter<String> adptr = new ArrayAdapter<String>(this,
androidx.appcompat.R.layout.support_simple_spinner_dropdown_item, str);
    adptr.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
    listBooks.setAdapter(adptr);
}

```

```
public void setTV(String str){
    TV.setText(str);
}
public void openView(int i){
    insScroll.setVisibility(View.GONE);
    updtScroll.setVisibility(View.GONE);
    delScroll.setVisibility(View.GONE);
    lodScroll.setVisibility(View.GONE);
    switch (i){
        case 1:
            insScroll.setVisibility(View.VISIBLE);
            break;
        case 2:
            updtScroll.setVisibility(View.VISIBLE);
            break;
        case 3:
            delScroll.setVisibility(View.VISIBLE);
            break;
        case 4:
            lodScroll.setVisibility(View.VISIBLE);
            break;
    }
}
}
```

Outputs :



Book CRUD Operation



Add New Book

3

Java for dummies

Barry A. Burd

3240

ADD NEW BOOK



Book CRUD Operation



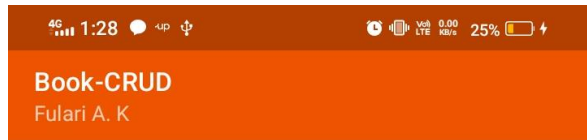
Book Records

ID: 1 Name: Billion Biography Author: Ambarish Fulari Price: 3565

ID: 2 Name: Basic C Programming Author: Dennis Ritchie Price: 645

ID: 3 Name: Java for dummies Author: Barry A. BurdPrice: 3240





Book CRUD Operation



Update Book Record

1 ▼

1

Bilion Biography

Azim Premji

3565

UPDATE RECORD



Book CRUD Operation



Book Records

ID: 1 Name: Bilion Biography Author: Azim Premji Price: 3565

ID: 2 Name: Basic C Programming Author: Dennis Ritchie Price: 645

ID: 3 Name: Java for dummies Author: Barry A. BurdPrice: 3240





Book CRUD Operation



Delete Book Record

2

DELETE RECORD



Book CRUD Operation



Book Records

ID: 1 Name: Billion Biography Author: Azim Premji Price:

3565

ID: 3 Name: Java for dummies Author: Barry A. BurdPrice:

3240



Q 12 : Write an android app to write JSON data into a file and read JSON data from created file.

activity_jsonactivity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.JSONActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="20dp">
    <Button
        android:id="@+id/read"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="READ JSON"/>
    <Button
        android:id="@+id/write"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="WRITE JSON"/>
    <TextView
        android:id="@+id/title"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="JSON String"
        android:textColor="@color/purple_500"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="20dp"/>
    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:scrollbars="vertical">
        <TextView
            android:id="@+id/view"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text=""/>
    </ScrollView>
```

```
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

JSONActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;
import android.Manifest;
import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Build;
import android.os.Bundle;
import android.os.Environment;
import android.provider.Settings;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;
import com.apaka.akashfulariassignment.R;
import org.json.JSONArray;
import org.json.JSONException;
import org.json.JSONObject;
import java.io.File;
import java.io.FileReader;
import java.io.FileWriter;
import java.util.HashMap;
import java.util.Iterator;

public class JSONActivity extends AppCompatActivity {
    private static final String JSON_FILE = "ApakaJSON.json";
    private TextView title,tv;
    private Button add,get;

    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_jsonactivity);
        getSupportActionBar().setTitle("JSON Handling");
        getSupportActionBar().setSubtitle("Fulari A. K");
        // get the reference of TextView's
        title = findViewById(R.id.title);
        tv = findViewById(R.id.view);
        add = findViewById(R.id.write);
```



```

get = findViewById(R.id.read);
checkPermission();
add.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String data = display(getJsonString());
        saveFile(data);
        tv.setText(data);
    }
});
get.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String data = readFile();
        tv.setText(data);
    }
});
}

public void checkPermission(){
    if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.R) {
        if (!Environment.isExternalStorageManager()) {
            Intent intent = new
Intent(Settings.ACTION_MANAGE_ALL_FILES_ACCESS_PERMISSION);
            startActivity(intent);
            return;
        }
    }
}

public String display(String data) {
    String str = "";
    try {
        JSONObject json = new JSONObject(data);
        JSONArray array = json.getJSONArray("students");
        str="{\n\tstudents:[\n";
        for (int i = 0; i < array.length(); i++) {
            JSONObject obj = array.getJSONObject(i);
            HashMap<String, String> map = new HashMap<String, String>();
            str+="\t\t{"\n";
            str+="\t\t\tname:"+obj.getString("name")+"\n";
            str+="\t\t\tbranch:"+obj.getString("branch")+"\n";
            str+="\t\t\tinstitute:"+obj.getString("institute")+"\n";
            str+="\t\t},\n";
        }
        str+="\t]\n";
    } catch (Exception ex) {}
    return str;
}

```

```

}
private void saveFile(String messageBody) {
    try {
        File fileDirectory = Environment.getExternalStorageDirectory();
        File savedFile = new File(fileDirectory.getAbsolutePath(),JSON_FILE);
        if(!savedFile.exists())
            savedFile.createNewFile();

        FileWriter fWriter = new FileWriter(savedFile.getAbsolutePath());
        fWriter.write(messageBody);//write data
        fWriter.flush();//flush writer
        fWriter.close();//close writer
        title.setText(JSON_FILE+" - Saved!!!");
    } catch (Exception e) {
        e.printStackTrace();
    }
}

private String readFile() {
    title.setText(JSON_FILE+" - Reading!!!");
    String savedData = "";
    File fileDirectory = Environment.getExternalStorageDirectory();
    if (!fileDirectory.exists())
        Toast.makeText(getApplicationContext(), "There is no main directory present. ",
Toast.LENGTH_SHORT).show();
    else {
        File savedFile = new File(fileDirectory.getAbsolutePath(),JSON_FILE);
        if (!savedFile.exists())
            Toast.makeText(getApplicationContext(), "There is no such file to read data. ",
Toast.LENGTH_SHORT).show();
        else {
            try {
                FileReader rdr = new FileReader(savedFile.getAbsolutePath());
                char[] inputBuffer = new char[1024];//get Block size as buffer
                int charRead = rdr.read(inputBuffer);
                //Read all data one by one by using loop and add it to string created above
                for (int k = 0; k < charRead; k++) {
                    savedData += inputBuffer[k];
                }
            } catch (Exception e) { e.printStackTrace(); }
        }
    }
    return savedData;
}

public String getJsonString(){
    String str = "{ 'students':[" +
        "{ 'name':'Akash Fulari','branch':'MCA','institute':'ZIBACAR'}," +

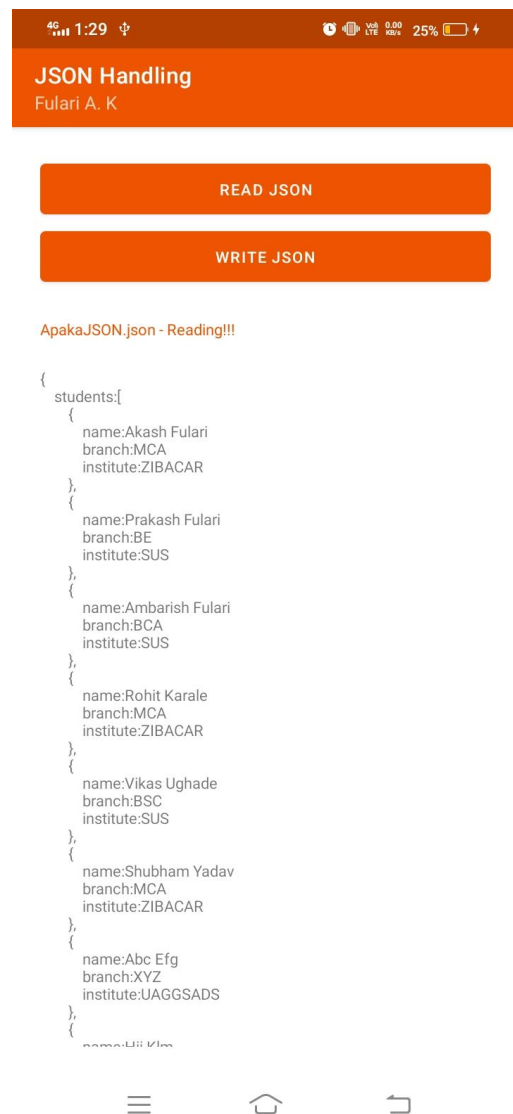
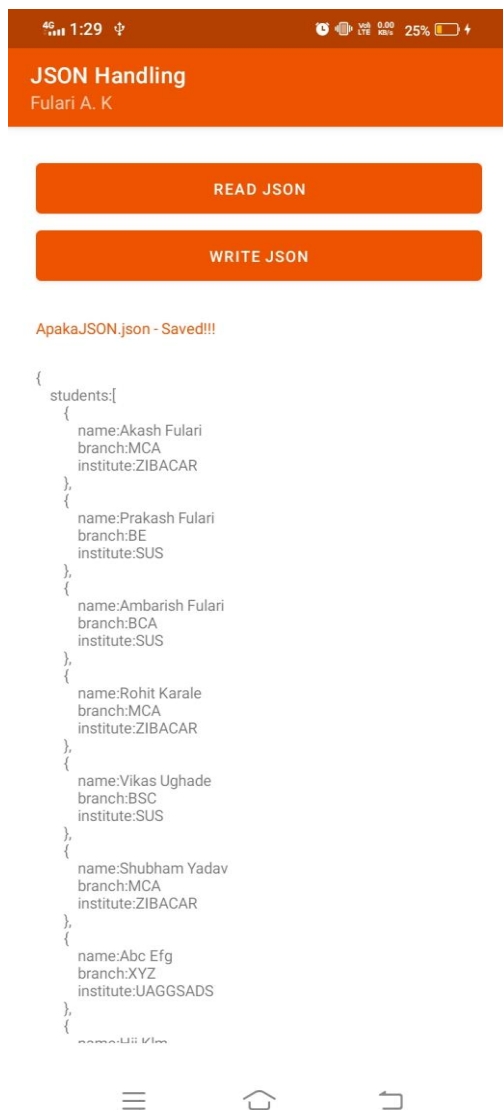
```

```

    "{ 'name':'Prakash Fulari','branch':'BE','institute':'SUS'}," +
    "{ 'name':'Ambarish Fulari','branch':'BCA','institute':'SUS'}," +
    "{ 'name':'Rohit Karale','branch':'MCA','institute':'ZIBACAR'}," +
    "{ 'name':'Vikas Ughade','branch':'BSC','institute':'SUS'}," +
    "{ 'name':'Shubham Yadav','branch':'MCA','institute':'ZIBACAR'}," +
    "{ 'name':'Abc Efg','branch':'XYZ','institute':'UAGGSADS'}," +
    "{ 'name':'Hij Klm','branch':'BDH','institute':'IAHDSHB'}," +
    "{ 'name':'Nop Qrs','branch':'MAJ','institute':'AYHGDB'}" +
    "]]";
return str;
}
}

```

Outputs :



Q 13 : Write an android code to make phone call using Intent.

activity_phone_call.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.PhoneCallActivity">
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_gravity="center"
    android:padding="20dp">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Make a Call"
        android:textStyle="bold"
        android:textSize="20dp"
        android:textColor="@color/purple_500"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="30dp"
        android:paddingLeft="20dp"/>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Mobile Number"
            android:paddingLeft="20dp"
            android:textStyle="bold|italic"/>
        <EditText
            android:id="@+id/mno"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:hint="Enter 10 Digit Mobile Number"
            android:text=""
            android:textSize="13dp"
```

```

        android:layout_marginLeft="20dp"
        android:layout_marginRight="20dp"/>
    </LinearLayout>
    <com.google.android.material.button.MaterialButton
        android:id="@+id/btn"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:cornerRadius="100dp"
        android:layout_marginTop="20dp"
        android:paddingTop="15dp"
        android:paddingBottom="15dp"
        android:text="Call Now" />
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

PhoneCallActivity.java

```

package com.apaka.akashfulariassignment.assignment3;

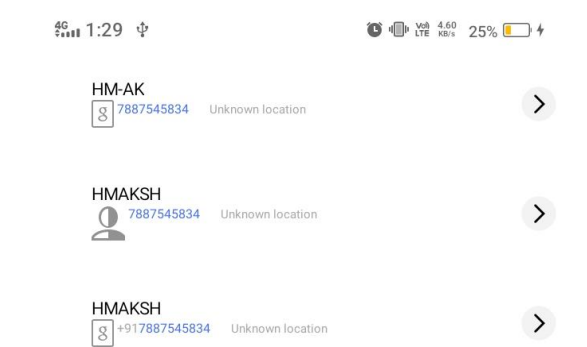
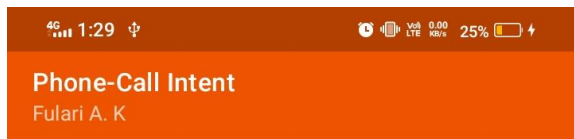
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import com.apaka.akashfulariassignment.R;
import java.net.URI;
import java.net.URL;

public class PhoneCallActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_phone_call);
        getSupportActionBar().setTitle("Phone-Call Intent");
        getSupportActionBar().setSubtitle("Fulari A. K");
        Button btn = findViewById(R.id.btn);
        EditText edt = findViewById(R.id.mno);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String str = edt.getText().toString();
            }
        });
    }
}

```

```
        if(str.length()>0){
            if(str.length()==10){
                Intent it = new Intent(Intent.ACTION_DIAL);
                it.setData(Uri.parse("tel:"+str));
                startActivity(it);
            }
            else {
                Toast.makeText(getApplicationContext(), "Invalid Mobile Number!!!",
Toast.LENGTH_SHORT).show();
            }
        }
        else {
            Toast.makeText(getApplicationContext(), "Please Enter Mobile Number!!!",
Toast.LENGTH_SHORT).show();
        }
    }
});
}
@Override
protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
}
}
```

Outputs :

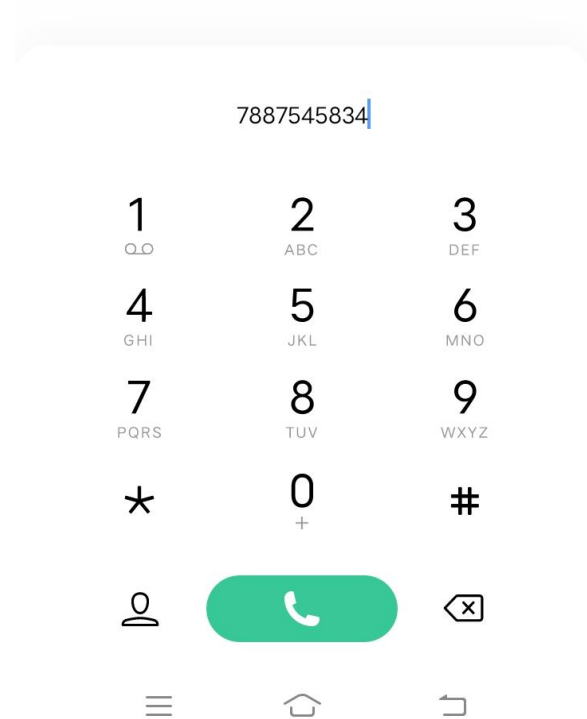


Make a Call

Mobile Number

7887545834

CALL NOW



Q 14 : Write an android code to turn ON/OFF Bluetooth.

activity_bluetooth.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.BluetoothActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Bluetooth Manager"
            android:textColor="@color/black"
            android:layout_marginTop="20dp"
            android:layout_marginBottom="20dp"
            android:textStyle="bold"
            android:textAlignment="center"
            android:textSize="20dp"/>
        <com.google.android.material.button.MaterialButtonToggleGroup
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
            <com.google.android.material.button.MaterialButton
                android:id="@+id/on"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:backgroundTint="@color/black"
                android:text="ON"/>
            <com.google.android.material.button.MaterialButton
                android:id="@+id/off"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:backgroundTint="@color/black"
                android:text="OFF"/>
            <com.google.android.material.button.MaterialButton
                android:id="@+id/visible"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
```



```

        android:backgroundTint="@color/black"
        android:text="Visible"/>
<com.google.android.material.button.MaterialButton
    android:id="@+id/listout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:backgroundTint="@color/black"
    android:text="Listout"/>
</com.google.android.material.button.MaterialButtonToggleGroup>
<ScrollView
    android:id="@+id/loadScroll"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical"
    android:layout_marginTop="10dp">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="30dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Status"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
        <TextView
            android:id="@+id/status"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="OFF"
            android:textColor="@color/green"
            android:layout_marginBottom="30dp"
            android:textStyle="bold"
            android:textSize="15dp"/>
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Paired Devices"
            android:textColor="@color/purple_500"
            android:layout_marginBottom="15dp"
            android:textStyle="bold"
            android:textSize="13dp"/>
    <ListView

```

```

        android:id="@+id/tvList"
        android:layout_width="match_parent"
        android:lineHeight="25dp"
        android:layout_height="match_parent"/>
    </LinearLayout>
</ScrollView>
</LinearLayout>
</androidx.coordinatorlayout.widget.CoordinatorLayout>

```

BluetoothActivity.java

```

package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import android.Manifest;
import android.annotation.SuppressLint;
import android.bluetooth.BluetoothAdapter;
import android.bluetooth.BluetoothDevice;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;
import com.apaka.akashfulariassignment.R;
import java.util.ArrayList;
import java.util.Set;

public class BluetoothActivity extends AppCompatActivity {
    private Button ON, OFF, VISIBLE, LISTOUT;
    private ListView LIST;
    private TextView STATUS;
    private BluetoothAdapter BA = BluetoothAdapter.getDefaultAdapter();
    private Set<BluetoothDevice> pairedDevices;
    private static final String[] BLE_PERMISSIONS = new String[]{
        Manifest.permission.ACCESS_COARSE_LOCATION,
        Manifest.permission.ACCESS_FINE_LOCATION,
    };
    private static final String[] ANDROID_12_BLE_PERMISSIONS = new String[]{
        Manifest.permission.BLUETOOTH_SCAN,
    };
}

```

```

        Manifest.permission.BLUETOOTH_CONNECT,
        Manifest.permission.ACCESS_FINE_LOCATION,
    };
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_bluetooth);
        getSupportActionBar().setTitle("Bluetooth Manager");
        getSupportActionBar().setSubtitle("Fulari A. K");
        ON = findViewById(R.id.on);
        OFF = findViewById(R.id.off);
        VISIBLE = findViewById(R.id.visible);
        LISTOUT = findViewById(R.id.listout);
        LIST = findViewById(R.id.tvList);
        STATUS = findViewById(R.id.status);
        if (BA == null) {
            STATUS.setText("device not supported");
        } else {
            checkPermission();
            ON.setOnClickListener(new View.OnClickListener() {
                public void onClick(View v) {
                    onBluetooth();
                }
            });
            OFF.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View arg0) {
                    offBluetooth();
                }
            });
            VISIBLE.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View arg0) {
                    visibleBluetooth();
                }
            });
            LISTOUT.setOnClickListener(new View.OnClickListener() {
                @Override
                public void onClick(View arg0) {
                    listDevices();
                }
            });
        }
    }
    @SuppressWarnings("MissingPermission")
    public void onBluetooth() {

```

```

        if (!BA.isEnabled()) {
            Intent it = new Intent(BluetoothAdapter.ACTION_REQUEST_ENABLE);
            startActivityForResult(it, 0);
            STATUS.setText("Turned on");
        } else {
            STATUS.setText("Already on");
        }
    }

    @SuppressWarnings("MissingPermission")
    public void offBluetooth() {
        BA.disable();
        STATUS.setText("Turned off");
    }

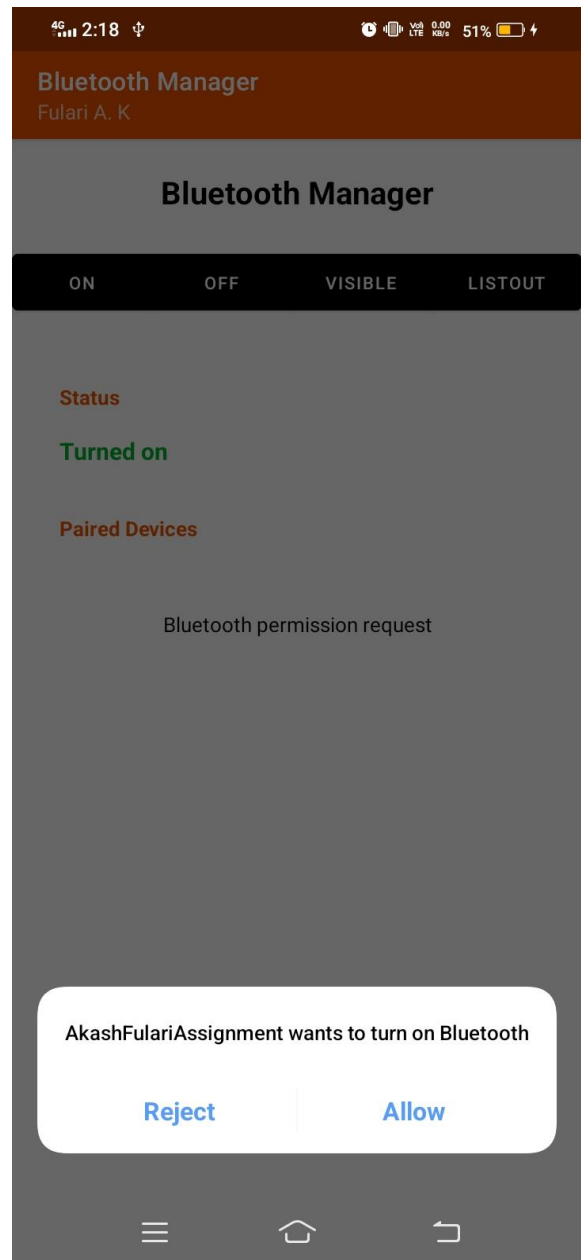
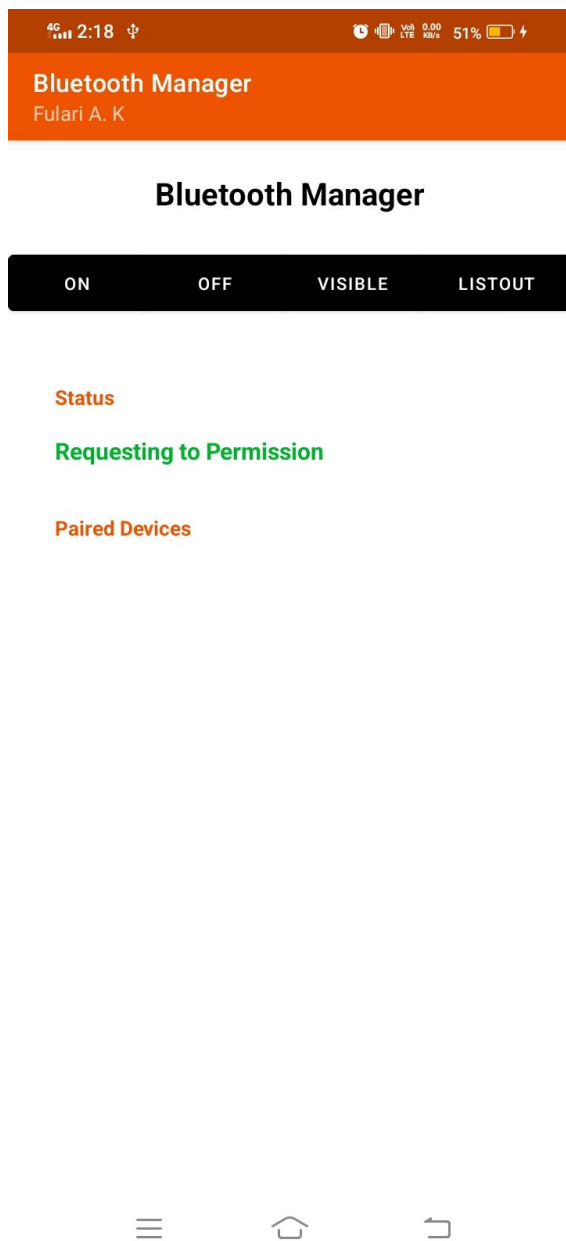
    @SuppressWarnings("MissingPermission")
    public void visibleBluetooth() {
        Intent getVisible = new Intent(BluetoothAdapter.ACTION_REQUEST_DISCOVERABLE);
        startActivityForResult(getVisible, 0);
    }

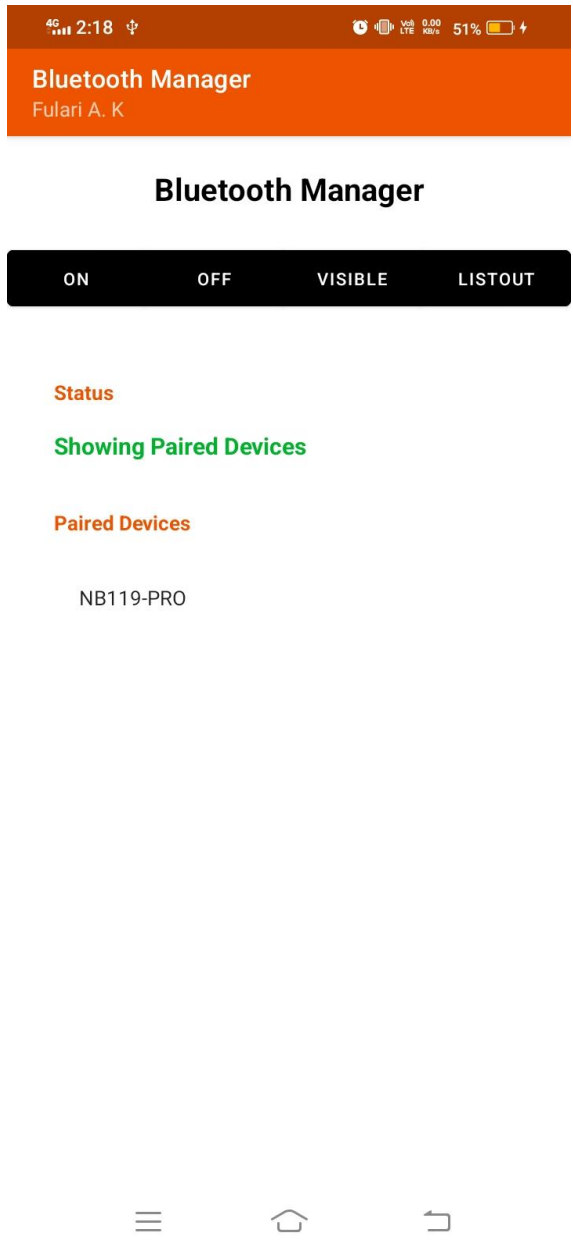
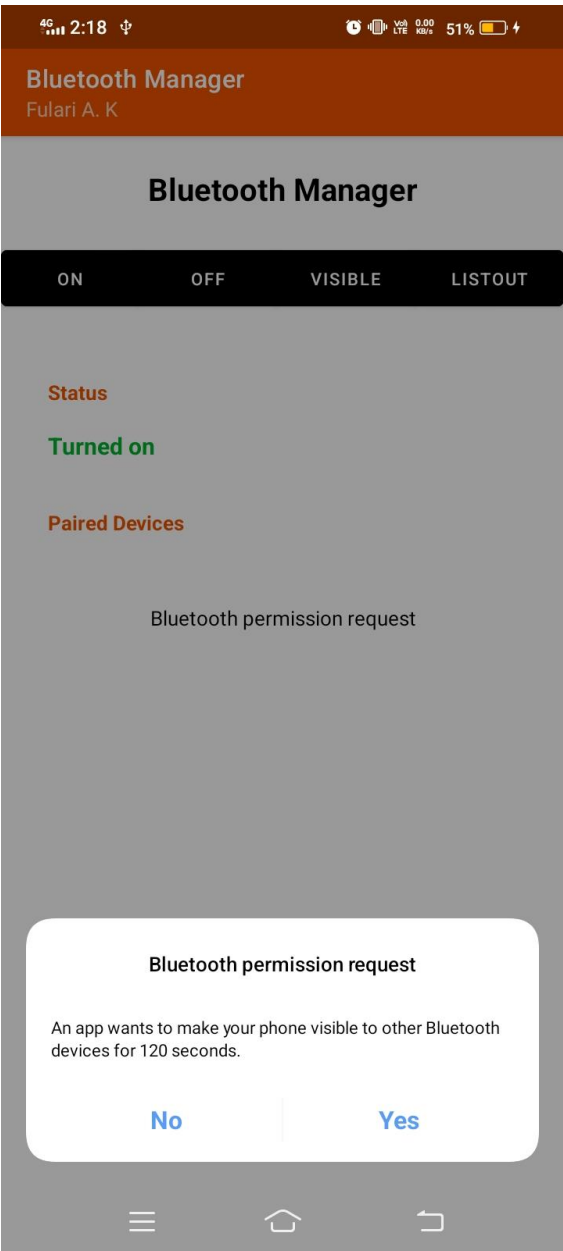
    @SuppressWarnings("MissingPermission")
    public void listDevices() {
        pairedDevices = BA.getBondedDevices();
        ArrayList list = new ArrayList();
        for(BluetoothDevice bt : pairedDevices) list.add(bt.getName());
        STATUS.setText("Showing Paired Devices");
        if(list.size()<=0)
            list.add("No Devices Found!!!.");
        final ArrayAdapter adapter = new ArrayAdapter(this, android.R.layout.simple_list_item_1,
list);
        LIST.setAdapter(adapter);
    }

    public void checkPermission(){
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.S)
            ActivityCompat.requestPermissions(this, ANDROID_12_BLE_PERMISSIONS, 100);
        else
            ActivityCompat.requestPermissions(this, BLE_PERMISSIONS, 100);
        STATUS.setText("Requesting to Permission");
    }
}

```

Outputs :





Bluetooth Manager

- ON
- OFF
- VISIBLE
- LISTOUT

Status

Turned off

Paired Devices

NB119-PRO

Q 15 : Write an android code to turn ON /OFF the Wi-Fi.

activity_wifi.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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=".assignment3.WifiActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="20dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="WIFI Manager"
            android:textColor="@color/black"
            android:layout_marginTop="20dp"
            android:layout_marginBottom="20dp"
            android:textStyle="bold"
            android:textAlignment="center"
            android:textSize="20dp"/>
        <TextView
            android:id="@+id/tv"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text=""
            android:textSize="15dp"
            android:textColor="@color/black"
            android:layout_marginTop="20dp"
            android:layout_marginBottom="30dp"
            android:paddingLeft="20dp"/>
        <ToggleButton
            android:id="@+id/btn"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="20dp"
            android:paddingTop="15dp"
            android:paddingBottom="15dp"
            android:text="Call Now" />
    </LinearLayout>
```



```
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

WifiActivity.java

```
package com.apaka.akashfulariassignment.assignment3;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.widget.CompoundButton;
import android.widget.TextView;
import android.widget.ToggleButton;
import com.apaka.akashfulariassignment.R;

public class WifiActivity extends AppCompatActivity {
    ToggleButton toggleButton;
    TextView textView;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_wifi);
        getSupportActionBar().setTitle("Wifi Manager");
        getSupportActionBar().setSubtitle("Fulari A. K");
        toggleButton = (ToggleButton) findViewById(R.id.btn);
        textView = (TextView) findViewById(R.id.tv);
        toggleWifi();
        toggleButton.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(CompoundButton compoundButton, boolean checked) {
                toggleWifi();
            }
        });
    }
    public void toggleWifi(){
        if (toggleButton.isChecked()) {
            textView.setText("WiFi Turned ON");
            WifiManager wifi = (WifiManager)
getApplicationContext().getSystemService(Context.WIFI_SERVICE);
            wifi.setWifiEnabled(true);
        } else {
            textView.setText("WiFi Turned OFF");
            WifiManager wifi = (WifiManager)
getApplicationContext().getSystemService(Context.WIFI_SERVICE);
```

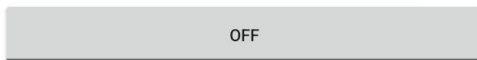
```
wifi.setWifiEnabled(false);  
}  
}  
}
```

Outputs :



WIFI Manager

WiFi Turned OFF



WIFI Manager

WiFi Turned ON

