

CSE- 4002 LAB Assignment

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Question:

Design any application. Using viewers and listeners

CODE :

Activity_main.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

    <Button
        android:id="@+id/button_scrollUp"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="132dp"
        android:layout_marginTop="28dp"
        android:text="Scroll Up"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
```

```
android:layout_marginTop="424dp"
android:text="Scroll Down"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.498"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

<ScrollView

```
android:id="@+id/scrollView"
android:layout_width="0dp"
android:layout_height="0dp"
android:layout_marginStart="16dp"
android:layout_marginTop="92dp"
android:layout_marginEnd="16dp"
android:layout_marginBottom="264dp"
app:layout_constraintBottom_toTopOf="@+id/textView3"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent">
```

<LinearLayout

```
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:orientation="vertical">
```

<ImageView

```
android:id="@+id/imageView"
android:layout_width="match_parent"
android:layout_height="wrap_content"
app:srcCompat="@drawable/taran_logo" />
```

<EditText

```
android:id="@+id/editTextTextPersonName"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:ems="10"
android:inputType="textPersonName"
android:text="Enter some text" />
```

<Button

```
android:id="@+id/button9"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="click" />
```

<VideoView

```
android:id="@+id/videoView"
android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content" />

<Button
    android:id="@+id/button8"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Button" />

<CalendarView
    android:id="@+id/calendarView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:baselineAligned="false" />

<Button
    android:id="@+id/button7"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Button" />

<Button
    android:id="@+id/button6"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Button" />

<Button
    android:id="@+id/button5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Button" />

<Button
    android:id="@+id/button4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Button" />

<Button
    android:id="@+id/button3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Button" />

</LinearLayout>
</ScrollView>

<RatingBar
```

```
        android:id="@+id/ratingBar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="72dp"
        android:layout_marginBottom="42dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView3"
        tools:ignore="SpeakableTextPresentCheck" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="28dp"
    android:text="Ratings"
    app:layout_constraintBottom_toTopOf="@+id/ratingBar"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/scrollView" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.viewers_listeners_19bce7346;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ScrollView;

public class MainActivity extends AppCompatActivity {

    private ScrollView scrollView;

    private Button buttonScrollUp;
    private Button buttonScrollDown;

    public static final int SCROLL_DELTA = 15; // Pixel.

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        this.scrollView = (ScrollView) this.findViewById(R.id.scrollView);
```

```
this.buttonScrollUp = (Button) this.findViewById(R.id.button_scrollUp);
this.buttonScrollDown = (Button) this.findViewById(R.id.button_scrollDown);

this.buttonScrollUp.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        doScrollUp();
    }
});

this.buttonScrollDown.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        doScrollDown();
    }
});
}

private void doScrollUp() {

    int x = this.scrollView.getScrollX();
    int y = this.scrollView.getScrollY();

    if(y - SCROLL_DELTA >= 0) {
        this.scrollView.scrollTo(x, y-SCROLL_DELTA);
    }

}

private void doScrollDown() {
    int maxAmount = scrollView.getMaxScrollAmount();

    int x = this.scrollView.getScrollX();
    int y = this.scrollView.getScrollY();

    if(y + SCROLL_DELTA <= maxAmount) {
        this.scrollView.scrollTo(x, y + SCROLL_DELTA);
    }
}
}
```

OUTPUT :



