Academic year: 2022-2023

Semester: Fall

Faculty Name: Dr. K.Rajesh

Branch/ Class: B.Tech

Date: 09-11-2022

School: SCOPE

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1.Design an app for home automation system. When ever the switch is on , change the color to green.
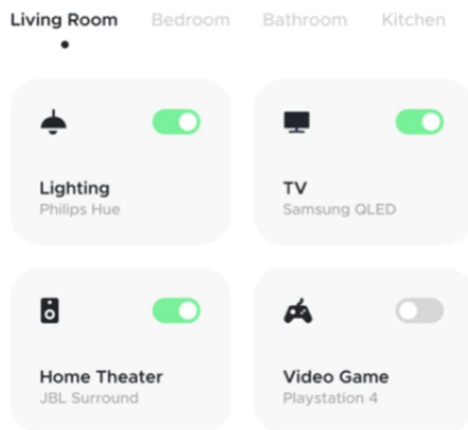
Code:

MainActivity.java:

```java
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import com.google.android.material.tabs.TabLayout;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        getSupportActionBar().hide();
        TabLayout tl1=findViewById(R.id.tablayout);
    }
}
```

activity_main.xml:

```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">
    <com.google.android.material.tabs.TabLayout
        android:id="@+id/tablayout"
```

```xml
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">
        <com.google.android.material.tabs.TabItem
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Living Room"
            />
        <com.google.android.material.tabs.TabItem
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Bed Room" />
        <com.google.android.material.tabs.TabItem
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Bathroom" />
        <com.google.android.material.tabs.TabItem
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="kitchen" />
</com.google.android.material.tabs.TabLayout>
<androidx.cardview.widget.CardView
    android:id="@+id/cardView"
    android:layout_width="150dp"
    android:layout_height="150dp"
    android:layout_marginTop="124dp"
    app:cardCornerRadius="15dp"
    android:outlineSpotShadowColor="@color/purple_500"
    android:backgroundTint="#979494"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.164"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" >
    <ImageView
        android:id="@+id/imageView"
        android:layout_width="39dp"
        android:layout_height="41dp"
        android:layout_marginTop="20dp"
        android:layout_marginStart="10dp"
        android:scaleType="center"
        app:srcCompat="@drawable/light" />
    <Switch
        android:id="@+id/switch2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="25dp"
        android:layout_marginStart="80dp"
        />
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Lightning"
        android:textSize="15dp"
        android:textStyle="bold"
        android:layout_marginTop="85dp"
        android:layout_marginStart="20dp"/>
    <TextView
        android:id="@+id/textView2"
```

```xml
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Philips Hue"
            android:textSize="12dp"
            android:layout_marginTop="105dp"
            android:layout_marginStart="20dp"/>
    </androidx.cardview.widget.CardView>
    <androidx.cardview.widget.CardView
        android:layout_width="150dp"
        android:layout_height="150dp"
        android:layout_marginTop="312dp"
        app:cardCornerRadius="15dp"
        app:layout_constraintEnd_toEndOf="parent"
        android:outlineSpotShadowColor="@color/purple_500"
        app:layout_constraintHorizontal_bias="0.877"
        android:backgroundTint="#979494"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" >
        <ImageView
            android:id="@+id/imageView4"
            android:layout_width="39dp"
            android:layout_height="41dp"
            android:layout_marginTop="20dp"
            android:layout_marginStart="10dp"
            android:scaleType="center"
            app:srcCompat="@drawable/games" />
        <Switch
            android:id="@+id/switch4"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="25dp"
            android:layout_marginStart="80dp"
            />
        <TextView
            android:id="@+id/textView7"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Video Game"
            android:textSize="15dp"
            android:textStyle="bold"
            android:layout_marginTop="85dp"
            android:layout_marginStart="20dp"/>
        <TextView
            android:id="@+id/textView8"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Play Station: 4"
            android:textSize="12dp"
            android:layout_marginTop="105dp"
            android:layout_marginStart="20dp"/>
    </androidx.cardview.widget.CardView>
    <androidx.cardview.widget.CardView
        android:layout_width="150dp"
        android:layout_height="150dp"
        android:layout_marginTop="124dp"
        app:cardCornerRadius="15dp"
        android:outlineSpotShadowColor="@color/purple_500"
        android:backgroundTint="#979494"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.877"
        app:layout_constraintStart_toStartOf="parent"
```

```xml
            app:layout_constraintTop_toTopOf="parent" >
        <ImageView
            android:id="@+id/imageView2"
            android:layout_width="39dp"
            android:layout_height="41dp"
            android:layout_marginTop="20dp"
            android:layout_marginStart="10dp"
            android:scaleType="center"
            app:srcCompat="@drawable/tv" />
        <Switch
            android:id="@+id/switch1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="25dp"
            android:layout_marginStart="80dp"
            />
        <TextView
            android:id="@+id/textView3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="TV"
            android:textSize="15dp"
            android:textStyle="bold"
            android:layout_marginTop="85dp"
            android:layout_marginStart="20dp"/>
        <TextView
            android:id="@+id/textView4"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Samsung OLED"
            android:textSize="12dp"
            android:layout_marginTop="105dp"
            android:layout_marginStart="20dp"/>
    </androidx.cardview.widget.CardView>
    <androidx.cardview.widget.CardView
        android:layout_width="150dp"
        android:layout_height="150dp"
        android:layout_marginTop="312dp"
        app:cardCornerRadius="15dp"
        android:outlineSpotShadowColor="@color/purple_500"
        android:backgroundTint="#979494"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.164"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" >
        <ImageView
            android:id="@+id/imageView3"
            android:layout_width="39dp"
            android:layout_height="41dp"
            android:layout_marginTop="20dp"
            android:layout_marginStart="10dp"
            android:scaleType="center"
            app:srcCompat="@drawable/speaker" />
        <Switch
            android:id="@+id/switch3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="25dp"
            android:layout_marginStart="80dp"
            />
        <TextView
```

```
        android:id="@+id/textView5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Home Theatre"
        android:textSize="15dp"
        android:textStyle="bold"
        android:layout_marginTop="85dp"
        android:layout_marginStart="20dp"/>
    <TextView
        android:id="@+id/textView6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="JBL, Surround"
        android:textSize="12dp"
        android:layout_marginTop="105dp"
        android:layout_marginStart="20dp"/>
    </androidx.cardview.widget.CardView>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Output:
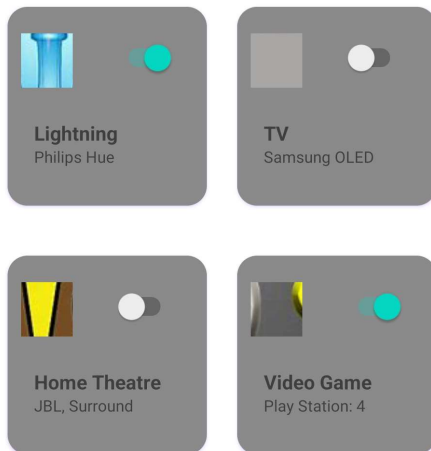
2. Design an App for a Home Automation using Toggle button.

Code:
MainActivity.java:

```java
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
public class MainActivity extends AppCompatActivity {
    int flag=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button b1=findViewById(R.id.button2);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if(flag==0){
                    b1.setText("All ON ");
                    flag=1;
                }
                else{
                    b1.setText("All OFF");
                    flag=0;
                }
            }
        });
    }
}
```

activity_main.xml:

```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">
    <TableLayout
        android:layout_width="200dp"
        android:layout_height="221dp"
        app:layout_constraintBottom_toBottomOf="parent"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.013"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.115">
        <TableRow
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:background="#C85B39"
            android:padding="15dp">
            <TextView
                android:id="@+id/textView"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Front Room"
                android:textSize="20dp"
                android:textStyle="bold"
                android:textColor="@color/white"/>
        </TableRow>
        <TableRow
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:background="#C85B39"
            android:padding="15dp">
            <TextView
                android:id="@+id/textView2"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Kitchen"
                android:textSize="20dp"
                android:textStyle="bold"
                android:textColor="@color/white"/>
        </TableRow>
        <TableRow
            android:layout_width="100dp"
            android:layout_height="10dp"
            android:background="#C85B39"
            android:padding="15dp">
            <TextView
                android:id="@+id/textView3"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Garage"
                android:textSize="20dp"
                android:textStyle="bold"
                android:textColor="@color/white"/>
        </TableRow>
        <TableRow
            android:layout_width="100dp"
            android:layout_height="10dp"
            android:background="#C85B39"
            android:padding="15dp">
            <TextView
                android:id="@+id/textView4"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Bed Room"
                android:textSize="20dp"
                android:textStyle="bold"
                android:textColor="@color/white"/>
        </TableRow>
```

```xml
        </TableLayout>
        <TableLayout
            android:layout_width="180dp"
            android:layout_height="229dp"
            android:layout_marginEnd="16dp"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintTop_toTopOf="parent"
            app:layout_constraintVertical_bias="0.117">
            <TableRow
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:padding="3dp">
                <Button
                    android:id="@+id/button2"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout_marginStart="30dp"
                    android:backgroundTint="#5872FF"
                    android:text="All OFF" />
            </TableRow>
            <TableRow
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:padding="3dp">
                <ToggleButton
                    android:id="@+id/toggleButton3"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout_marginStart="30dp"
                    android:shadowColor="#5872FF"
                    android:text="ToggleButton" />
            </TableRow>
            <TableRow
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:padding="3dp">
                <ToggleButton
                    android:id="@+id/toggleButton4"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout_marginStart="30dp"
                    android:text="ToggleButton" />
            </TableRow>
            <TableRow
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:padding="3dp">
                <ToggleButton
                    android:id="@+id/toggleButton5"
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:layout_marginStart="30dp"
                    android:text="ToggleButton" />
            </TableRow>
        </TableLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```
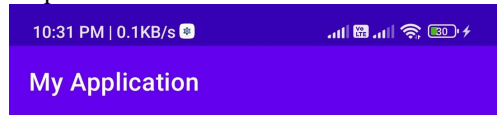
Output:

10:31 PM | 0.1KB/s

My Application

Front Room

Kitchen

Garage

Bed Room

ALL OFF

ON

OFF

OFF