

```
package com.example.smarthomeapp;

import android.os.Bundle;
import android.widget.Button;
import android.widget.Toast;
import
androidx.appcompat.app.AppCompatActivity;
import
com.google.android.material.snackbar.Snack
bar;

public class MainActivity extends
AppCompatActivity {
    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // Buttons for controlling devices
        Button lightButton =
findViewById(R.id.btn_light);
        Button acButton =
findViewById(R.id.btn_ac);
        Button musicButton =
findViewById(R.id.btn_music);

        // Button actions
        lightButton.setOnClickListener(v -> {
            Toast.makeText(this, "Lights toggled",
Toast.LENGTH_SHORT).show();
        });

        acButton.setOnClickListener(v -> {
            Toast.makeText(this, "AC temperature
adjusted", Toast.LENGTH_SHORT).show();
        });

        musicButton.setOnClickListener(v -> {
            Toast.makeText(this, "Music is
playing", Toast.LENGTH_SHORT).show();
        });
    }
}
```

```
}  
}
```

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<LinearLayout
```

```
    xmlns:android="http://  
schemas.android.com/apk/res/android"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:orientation="vertical"  
    android:padding="16dp"  
    android:gravity="center">
```

```
<Button
```

```
    android:id="@+id/btn_light"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Toggle Lights"  
    android:layout_marginBottom="16dp" />
```

```
<Button
```

```
    android:id="@+id/btn_ac"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Adjust AC"  
    android:layout_marginBottom="16dp" />
```

```
<Button
```

```
    android:id="@+id/btn_music"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Play Music" />
```

```
</LinearLayout>
```

```
implementation
```

```
'com.google.android.gms:play-services-  
speech:21.0.1'
```

```
import android.content.Intent;
```

```
import android.speech.RecognizerIntent;
```

```
import android.widget.ImageButton;
```

```
import java.util.ArrayList;

public class MainActivity extends
    AppCompatActivity {
    private static final int REQUEST_CODE =
    100;

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

        // Voice Command Button
        ImageButton voiceButton =
        findViewById(R.id.btn_voice);

        voiceButton.setOnClickListener(v -> {
            Intent intent = new
            Intent(RecognizerIntent.ACTION_RECOGNIZE
            _SPEECH);

            intent.putExtra(RecognizerIntent.EXTRA_LAN
            GUAGE_MODEL,
            RecognizerIntent.LANGUAGE_MODEL_FREE_
            FORM);

            intent.putExtra(RecognizerIntent.EXTRA_LAN
            GUAGE, "en-US");

            try {
                startActivityForResult(intent,
                REQUEST_CODE);
            } catch (Exception e) {
                Toast.makeText(this, "Voice
                recognition not supported",
                Toast.LENGTH_SHORT).show();
            }
        });
    }

    @Override
```

```

protected void onActivityResult(int
requestCode, int resultCode, Intent data) {
    super.onActivityResult(requestCode,
resultCode, data);

    if (requestCode == REQUEST_CODE &&
resultCode == RESULT_OK && data != null) {
        ArrayList<String> results =
data.getStringArrayListExtra(RecognizerInten
t.EXTRA_RESULTS);
        String command =
results.get(0).toLowerCase();

        // Handle voice commands
        if (command.contains("light")) {
            Toast.makeText(this, "Lights toggled
via voice", Toast.LENGTH_SHORT).show();
        } else if (command.contains("air") ||
command.contains("ac")) {
            Toast.makeText(this, "AC adjusted
via voice", Toast.LENGTH_SHORT).show();
        } else if (command.contains("music"))
{
            Toast.makeText(this, "Music played
via voice", Toast.LENGTH_SHORT).show();
        } else {
            Toast.makeText(this, "Unknown
command: " + command,
Toast.LENGTH_SHORT).show();
        }
    }
}
}

```

```

<ImageButton
    android:id="@+id/btn_voice"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:src="@android:drawable/
ic_btn_speak_now"
    android:contentDescription="Voice
Command"

```

android:layout_marginTop="24dp" />