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LAB: CSE4002 Mobile Application Development LAB

Design an App that plays music when clicked the buttons. Use Services to start and stop the music.

MainActivity.java

```
package com.example.music;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.content.Intent;

public class MainActivity extends AppCompatActivity {
    Button b1,b2,b3,b4;
    Boolean flag = true;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        b1 = findViewById(R.id.music1);
        b2 = findViewById(R.id.music2);
        b3 = findViewById(R.id.music3);
        b4 = findViewById(R.id.music4);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(getApplicationContext(),MyService.class);
                i.putExtra("name","sound1");
                if(flag)
                    startService(i);
                else
                    stopService(i);
                flag=!flag;
            }
        });

        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new Intent(getApplicationContext(),MyService.class);
                i.putExtra("name","sound2");
                if(flag)
                    startService(i);
                else
                    stopService(i);
                flag=!flag;
            }
        });
    }
}
```

```

    }
});

b3.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent i = new Intent(getApplicationContext(), MyService.class);
        i.putExtra("name", "sound3");
        if(flag)
            startService(i);
        else
            stopService(i);
        flag=!flag;
    }
});

b4.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent i = new Intent(getApplicationContext(), MyService.class);
        i.putExtra("name", "sound4");
        if(flag)
            startService(i);
        else
            stopService(i);
        flag=!flag;
    }
});
}
}
}

```

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/music3"
        android:layout_width="160dp"
        android:layout_height="160dp"
        android:layout_marginTop="16dp"
        android:text="music3"
        android:visibility="visible"
        app:layout_constraintStart_toStartOf="@+id/music1"
        app:layout_constraintTop_toBottomOf="@+id/music1" />

    <Button
        android:id="@+id/music4"
        android:layout_width="160dp"
        android:layout_height="160dp"
        android:layout_marginTop="16dp"
        android:text="music4"
        app:layout_constraintStart_toStartOf="@+id/music2"
        app:layout_constraintTop_toBottomOf="@+id/music2" />

```

```

<Button
    android:id="@+id/music1"
    android:layout_width="160dp"
    android:layout_height="160dp"
    android:layout_marginTop="64dp"
    android:text="music1"
    android:visibility="visible"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.1"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/music2"
    android:layout_width="160dp"
    android:layout_height="160dp"
    android:layout_marginTop="64dp"
    android:text="music2"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.9"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

MyService.java

```

package com.example.music;

import android.app.Service;
import android.content.Intent;
import android.media.MediaPlayer;
import android.os.IBinder;

public class MyService extends Service {

    int file_id=-1;
    MediaPlayer mediaPlayer;

    @Override
    public IBinder onBind(Intent intent) {
        // TODO: Return the communication channel to the service.
        throw new UnsupportedOperationException("Not yet implemented");
    }

    @Override
    public int onStartCommand(Intent i, int flags, int startId){
        String filename = i.getStringExtra("name");
        Boolean flag = i.getBooleanExtra("flag",true);
        file_id =
this.getResources().getIdentifier(filename,"raw",this.getPackageName());
        mediaPlayer = MediaPlayer.create(this, file_id);
        if(flag)
            mediaPlayer.start();
        else
            mediaPlayer.pause();
        return super.START_STICKY;
    }
}

```

```
@Override  
public void onDestroy(){  
    super.onDestroy();  
    mediaPlayer.stop();  
}  
}
```

OUTPUT:

