

[2CEIT5PE5: MOBILE APPLICATION DEVELOPMENT]

Practical: 6

AIM - What is Service? Write down types of Service. Create an MP3 player application by using service by following below instructions.

1. Create MainActivity and design according to shown in below image.
2. Create Service Class and implement MediaPlayer Object.

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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">

    <com.google.android.material.card.MaterialCardView
        android:id="@+id/materialCardView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginHorizontal="20dp"

        android:layout_marginTop="20dp"
        android:elevation="20dp"
        app:cardBackgroundColor="@color/cardview_light_background"
        app:cardCornerRadius="20dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView">

        <ImageView
            android:id="@+id/imageView2"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            app:srcCompat="@drawable/media" />
    </com.google.android.material.card.MaterialCardView>

    <com.google.android.material.card.MaterialCardView
        android:layout_width="match_parent"
        android:layout_height="150dp"
        android:layout_marginHorizontal="20dp"
        android:layout_marginTop="30dp"
        android:layout_marginBottom="30dp"
        android:elevation="20dp"
        app:cardCornerRadius="20dp"
        app:cardElevation="20dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/materialCardView">

        <androidx.constraintlayout.widget.ConstraintLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent">
```

```
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Dosti Music Video"
    android:textSize="15dp"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.088" />

<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/playbtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:backgroundTint="#96553f"
    android:src="@drawable/baseline_play_arrow_24"
    app:elevation="30dp"
    app:fabSize="normal"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toBottomOf="parent" >
</com.google.android.material.floatingactionbutton.FloatingActionButton>

<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/next_btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginStart="5dp"
    android:src="@drawable/baseline_skip_next_24"
    app:elevation="30dp"
    app:fabSize="mini"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toEndOf="@id/playbtn"
    app:layout_constraintTop_toTopOf="parent" >
</com.google.android.material.floatingactionbutton.FloatingActionButton>

<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/stop_btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="right"
    android:layout_marginStart="5dp"
    android:src="@drawable/baseline_stop_24"
```

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```
        app:elevation="30dp"
        app:fabSize="mini"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toEndOf="@id/next_btn"
        app:layout_constraintTop_toTopOf="parent" >
</com.google.android.material.floatingactionbutton.FloatingActionButton>

<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/previous_btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginEnd="5dp"
    android:src="@drawable/baseline_skip_previous_24"
    app:elevation="30dp"
    app:fabSize="mini"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@id/playbtn"
    app:layout_constraintTop_toTopOf="parent" >
</com.google.android.material.floatingactionbutton.FloatingActionButton>

<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/shuffle_btn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginEnd="5dp"
    android:src="@drawable/baseline_shuffle_24"
    app:elevation="30dp"
    app:fabSize="mini"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@id/previous_btn"
    app:layout_constraintTop_toTopOf="parent" >
</com.google.android.material.floatingactionbutton.FloatingActionButton>

</androidx.constraintlayout.widget.ConstraintLayout>

</com.google.android.material.card.MaterialCardView>

<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:text="MP3 Player "
    android:textSize="30sp"
    android:textStyle="bold"
```

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```
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.kt :

```
package com.example.mad_practical_6_21012021003
```

```
import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.widget.Button
import com.google.android.material.floatingactionbutton.FloatingActionButton
```

```
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
```

```
        val buttonPlay: FloatingActionButton = findViewById(R.id.playbtn)
        buttonPlay.setOnClickListener {
            playPause()
        }
```

```
        val buttonStop: FloatingActionButton = findViewById(R.id.stop_btn)
        buttonStop.setOnClickListener {
            stop()
        }
    }
```

```
    fun playPause(){
        Intent(applicationContext, MyService::class.java).putExtra(MyService.PLAYERKEY,
        MyService.PLAYERVALUE).apply { startService(this) }
    }
    fun stop(){
        Intent(applicationContext, MyService::class.java).putExtra(MyService.PLAYERKEY,
        MyService.PLAYERVALUE).apply { stopService(this) }
    }
}
```

MyService.kt

```
package com.example.mad_practical_6_21012021003

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

class MyService : Service() {
    lateinit var player:MediaPlayer
    companion object{
        val PLAYERKEY = "SERVICE"
        val PLAYERVALUE = "play/pause"
    }
    override fun onBind(intent: Intent): IBinder {
        TODO("Return the communication channel to the service.")
    }
    override fun onStartCommand(intent: Intent?, flags: Int, startId: Int): Int {
        if(!this::player.isInitialized){
            player = MediaPlayer.create(this, R.raw.song)
        }
        if(intent != null){
            val dataValue = intent.getStringExtra(PLAYERKEY)
            if(dataValue == PLAYERVALUE){
                if(!player.isPlaying){
                    player.start()
                }
                else{
                    player.pause()
                }
            }
        }
        else{
            player.stop()
        }
        return START_STICKY
    }
}
```

