

# 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">

    <androidx.core.widget.NestedScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

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

            <TextView
                android:id="@+id/textView"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_marginTop="25dp"
                android:text="MP3 Player"
                android:textSize="20sp"
                app:layout_constraintEnd_toEndOf="parent"
                app:layout_constraintStart_toStartOf="parent"
                app:layout_constraintTop_toTopOf="parent" />

            <com.google.android.material.card.MaterialCardView
                android:id="@+id/materialCardView"
                android:layout_width="match_parent"
                android:layout_height="400dp"
                android:layout_marginTop="15dp"
                android:layout_marginHorizontal="10dp"
                app:cardCornerRadius="20dp"
                app:cardElevation="20dp"
                app:layout_constraintStart_toStartOf="parent"
                app:layout_constraintTop_toBottomOf="@+id/textView">

                <ImageView
                    android:id="@+id/imageView"
                    android:layout_width="match_parent"
```

## Practical: 6

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```
        android:layout_height="wrap_content"
        android:scaleType="fitXY"
        app:srcCompat="@drawable/image" />
</com.google.android.material.card.MaterialCardView>

<com.google.android.material.card.MaterialCardView
    android:layout_width="match_parent"
    android:layout_height="200dp"
    app:cardElevation="20dp"
    app:cardCornerRadius="20dp"
    android:padding="10dp"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/materialCardView"
    android:layout_marginTop="25dp"
    android:layout_marginHorizontal="10dp">

    <androidx.constraintlayout.widget.ConstraintLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:padding="15dp">

        <TextView
            android:id="@+id/textView2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Music"
            android:textSize="24sp"
            android:textStyle="bold"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent" />

        <com.google.android.material.floatingactionbutton.FloatingActionButton
            android:id="@+id/stop_button"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:backgroundTint="#71706E"
            app:borderWidth="0dp"
            app:elevation="50dp"
            app:fabSize="mini"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.5"
            app:layout_constraintStart_toEndOf="@+id/next_button"
            app:layout_constraintTop_toTopOf="parent"
            app:srcCompat="@drawable/baseline_stop_24"
            app:tint="@color/white" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/next_button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:backgroundTint="#71706E"
    app:borderWidth="0dp"
    app:elevation="50dp"
    app:fabSize="auto"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/stop_button"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/play_button"
    app:layout_constraintTop_toTopOf="parent"
    app:srcCompat="@drawable/baseline_skip_next_24"
    app:tint="@color/white" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/play_button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:backgroundTint="#c30000"
    app:borderWidth="0dp"
    app:elevation="50dp"
    app:fabCustomSize="@android:dimen/notification_large_icon_height"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/next_button"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/previous_button"
    app:layout_constraintTop_toTopOf="parent"
    app:srcCompat="@drawable/baseline_play_arrow_24"
    app:tint="@color/white" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/previous_button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:backgroundTint="#71706E"
    app:borderWidth="0dp"
    app:elevation="50dp"
    app:fabSize="auto"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/play_button"
    app:layout_constraintHorizontal_bias="0.5"
```

## Practical: 6

```
app:layout_constraintStart_toEndOf="@+id/shuffle_button"
app:layout_constraintTop_toTopOf="parent"
app:srcCompat="@drawable/baseline_skip_previous_24"
app:tint="@color/white" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/shuffle_button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:backgroundTint="#71706E"
    app:borderWidth="0dp"
    app:elevation="50dp"
    app:fabSize="mini"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/previous_button"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:srcCompat="@drawable/baseline_shuffle_24"
    app:tint="@color/white" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
</com.google.android.material.card.MaterialCardView>
```

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

```
</androidx.core.widget.NestedScrollView>
```

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

### **MainActivity.kt :-**

```
package com.example.mad_practical_6_21012021012

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?) {
```

## Practical: 6

---

```
super.onCreate(savedInstanceState)
setContentView(R.layout.activity_main)

val start : FloatingActionButton = findViewById(R.id.play_button)
start.setOnClickListener {
    play()
}

val stop : FloatingActionButton = findViewById(R.id.stop_button)
stop.setOnClickListener {
    pause()
}
}

fun play(){
Intent(applicationContext,MyService::class.java).putExtra(MyService.PLAYERCONSTANT,"abc").apply { startService(this) }
}

fun pause(){
Intent(applicationContext,MyService::class.java).putExtra(MyService.PLAYERCONSTANT,"xyz").apply { stopService(this) }
}
}
```

### **MyService.kt :-**

```
package com.example.mad_practical_6_21012021012

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

class MyService : Service() {

    companion object {
        val PLAYERCONSTANT = "PLAY/PAUSE"
    }

    override fun onBind(intent: Intent): IBinder {
        TODO("Return the communication channel to the service.")
    }
}
```

## Practical: 6

---

```
lateinit var player : MediaPlayer

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 command = intent.getStringExtra(PAYERCONSTANT)

        if (!player.isPlaying) {
            player.start()
        }
        else {
            player.pause()
        }
    }

    else {
        player.stop()
    }

    return START_STICKY
}

override fun onDestroy() {
    player.stop()
    super.onDestroy()
}
}
```

### Output :-

## Practical: 6

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