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
<?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"
```

```
            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"
```

```
            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_21012021070

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 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").appl
y { startService(this) }
  }

  fun pause(){

Intent(applicationContext,MyService::class.java).putExtra(MyService.PLAYERCONSTANT,"xyz").app
ly { stopService(this) }
  }
}
```

MyService.kt :-

```
package com.example.mad_practical_6_21012021070

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.")
  }
```

```kotlin
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(PLAYERCONSTANT)

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

    else {
        player.stop()
    }

    return START_STICKY
}

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

Output :-

LIGHT THEME

DARK THEME