# Media Framework

# Introduction

❖ Android support playing audio and video through the `android.media` **package.**

❖ **The** `android.media.MediaPlayer` **class is responsible for playing both audio and video.**

❖ We can play audio and video that are part of the .apk file, from the web via a URL address and from the device's SD card.

# Introduction

❖ Packing the audio and the video file as part of the .apk can be done either as an asset (within the '`assets`' folder) or as a resource (within the '`res`' folder).

# Simple MP3 Player

```java
package com.abelski.samples;

import android.app.Activity;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.LinearLayout;

public class SimpleMP3PlayerActivity extends Activity
{
    static final String AUDIO_URL =
"http://www.diputaciondevalladolid.es/extras/musica_mp3/corales2/01_c
oral_voces_amigas_canto_a_castilla.mp3";
    private MediaPlayer mediaPlayer;
    private int playbackPosition = 0;
```

# Simple MP3 Player

```java
@Override
public void onCreate(Bundle savedInstanceState)
{
    super.onCreate(savedInstanceState);
    Button startBt = new Button(this);
    Button stopBt = new Button(this);
    Button pauseBt = new Button(this);
    Button resumeBt = new Button(this);
    startBt.setText("start");
    stopBt.setText("stop");
    pauseBt.setText("pause");
    resumeBt.setText("resume");
    LinearLayout layout = new LinearLayout(this);
    layout.addView(startBt);
    layout.addView(stopBt);
    layout.addView(pauseBt);
    layout.addView(resumeBt);
    setContentView(layout);
```

# Simple MP3 Player

```java
startBt.setOnClickListener(new OnClickListener()
{
    public void onClick(View view)
    {
        try
        {
            playAudio(AUDIO_URL);
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
});
stopBt.setOnClickListener(new OnClickListener()
{
    public void onClick(View view)
    {
        if (mediaPlayer != null)
        {
            mediaPlayer.stop();
        }
    }
});
```

# Simple MP3 Player

```java
pauseBt.setOnClickListener(new OnClickListener()
{
    public void onClick(View view)
    {
        if (mediaPlayer != null)
        {
            playbackPosition =
                mediaPlayer.getCurrentPosition();
            mediaPlayer.pause();
        }
    }
});

resumeBt.setOnClickListener(new OnClickListener()
{
    public void onClick(View view)
    {
        if (mediaPlayer != null)
        {
            mediaPlayer.start();
            mediaPlayer.seekTo(playbackPosition);
        }
    }
});
}
```

# Simple MP3 Player

```java
private void playAudio(String url) throws Exception
{
    killMediaPlayer();
    mediaPlayer = new MediaPlayer();
    mediaPlayer.setDataSource(url);
    mediaPlayer.prepare();
    mediaPlayer.start();
}

@Override
protected void onDestroy()
{
    super.onDestroy();
    killMediaPlayer();
}
```

# Simple MP3 Player

```java
private void killMediaPlayer()
{
    if (mediaPlayer != null)
    {
        try
        {
            mediaPlayer.release();
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

# Simple MP3 Player

# Simple Video Player

❖ The android platform supports playing audio and playing video through the `android.media` package. We use the `VideoView` class.

❖ The video file should be of `MP4` format.

❖ If the video vile is fetched over the web you should add the required permission.

```
<user-permission android:name="android.permission.INTERNET">
</user-permission>
```

# Simple Video Player

```java
package com.abelski.samples;

import android.app.Activity;
import android.net.Uri;
import android.os.Bundle;
import android.widget.*;

public class SimpleVideoPlayerActivity extends Activity
{
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        this.setContentView(R.layout.main);
        VideoView videoView = (VideoView) this.findViewById(R.id.video_view);
        MediaController mc = new MediaController(this);
        videoView.setMediaController(mc);
        videoView.setVideoURI(
            Uri.parse("http://www.abelski.com/courses/android/scala.mp4"));
        // videoView.setVideoURI(Uri.parse("file:///sdcard/scala.mp4"));
        videoView.requestFocus();
    }
}
```