CODEV

VIDEO HANDLER

MEng Year 3

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1. Video Player

1.1 Requirements

The service provider will design an extension capable of displaying a video for playback. This feature should be tailored for small tutorial videos (aimed to be between 5-10 seconds in length). A visible play button should exist in the centre of the video, and the user should be able to touch the screen to both start and stop the video playback. If possible, an option to rewind playback would be included. The extension should match the parent constraint sizing.

1.2 Video Player Specification

The video handler developed by CoDev has implemented the popular Exo-Player as the main way to play video files. These video files can be both played from a directory on the local device or by URL if the file is saved on a cloud service like Firebase.

The video handler can play videos of all lengths giving the customer flexibility if they wish to use the player for bigger demo files.

The video handler has a visible play button on screen as well as all playback options associated with a video player that can be operated by tapping on the screen.

The video handler also takes in sizing options, so the customer has the ability to alter the size of the player in any way they see fit as well as placing it wherever they desire.

2. Setting up Exo-Player

2.1 Gradle

To use the Exo-Player library, dependencies will have to be added to the application build.gradle file.

Within android{}, you will need to add,

```
compileOptions {
        targetCompatability JavaVersion.VERSION_1_8
}
```

Now within dependencies{}, you will need to add,

```
implementation 'com.google.android.exoplayer:exoplayer-core:2.10.5'
implementation 'com.google.android.exoplayer:exoplayer-dash:2.10.5'
implementation 'com.google.android.exoplayer:exoplayer-ui:2.10.5'
```

3. Creating the player

3.1 Creating an Instance

You can create an instance of the player with the following;

```
PresentationPlayerView test = new PresentationPlayerView(getContext(),
displayMetrics.heightPixels, displayMetrics.widthPixels);
```

Using displayMetrics to get the height and width of the screen you can get pass through the dimensions of the screen.

3.2 Initialising

Next step is to initialise the player;

```
test.initializePlayer(url, Boolean.TRUE);
```

This is where you pass the URL of the video you would like to play as an argument. This can be a link to a cloud service or a local file address. Passing a Boolean value of `True` will set the player to start the video automatically. Keep this as `False` if the user is to start the video.

3.3 Setting Dimensions

For setting the dimensions and position of the video on screen;

```
test.setDims(100F, 100F);
test.setpos(50F, 50F)
```

These functions take in floats as arguments as a percentage of the screen. For example, `test.setDims(100F, 100F)` sets the video to full screen.

3.4 Adding to a layout

Last step is to add the player to a layout;

```
topLayout.addView(test);
```