



Lab – 01/03/2022

Question [1] How to reverse music at:

[a] <https://youtu.be/PdaZ1RapL-M>

Answer: <https://youtu.be/NSMbW2Fzog8>

[a] <https://youtu.be/ngXGK7DJVJI>

Answer : <https://youtu.be/gCqHDDIZ-UQ>

1. Describe how you would reverse the videos given above?
2. Could you embed your videos at your web site at:

<http://oldtown.glendon.yorku.ca/~lastname/2023/2655/webvideo/>

You may need this code at:

<http://oldtown.glendon.yorku.ca/~teaching/2023/huma2655/hw2/code>

(The file is video.html)

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>My first website</title>
```

```
</head>
```

```
<body>
```

```
  <!-- MP4, WebM, and Ogg -->
```

```
  <video controls autoplay muted loop width="500">
```

```
    <source src="yourvideo.mp4"> /* You have to have this video in your directory where your html resides */
```

```
    This browser does not support HTML5 audio
```

```
  </video>
```

```
</body>
```

```
</html>
```

Question [2] Can you take your work a step further? I will show you how to make web pages like this at your Glendon web site.

[a] <http://oldtown.glendon.yorku.ca/~teaching/2023/huma2655/hw2/audioplayer/i3.html>

[b] <http://oldtown.glendon.yorku.ca/~teaching/2023/huma2655/media/music01.html>

[c] <http://oldtown.glendon.yorku.ca/~demo01/tea/media/webvideo/>



End of lab for 01/03/2013

Question [3] How to reverse music

Audacity	Cadence	Tempo	Beethoven	Pour Elise	Avidemux
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Submission link at eclass

Question [1] Consider the two short music videos at:
<http://oldtown.glendon.yorku.ca/~teaching/2655/2022/hw1/>

[a] Tempo

Why is there such a size difference between the two videos? Which one is longer?

1. Beats per minute (BPM) and frames per seconds (fps)

Explain the difference in terms of “tempo” between the two videos.

2. Audio, video processing and music synchronization

This [video](#) demonstrates the steps I took to make the video [fur_elise_v2.mp4](#) from the video [fur_elise_v1.webm](#) .
Listen carefully to the music.

Which audio effects and which interval (s) have I applied to make the video [fur_elise_v2.mp4](#)? Could you list all the steps I took? If necessary, use: Audacity → import > (video name) and examine the waveform.

3. [Tempo](#) (88 per cent)

Just like shown in the video in (c) above, make a new video named [fur_elise_v3.mp4](#) from [fur_elise_v1.webm](#). But this time, your video should play at 88% tempo.

Display your video in (ii) at your Glendon web site:

<http://oldtown.glendon.yorku.ca/~yourname/2655/hw1/88pctempo/>



Question [4] Make a chorus effect with Fred Mercury

Given a segment from Bohemian Rhapsody at:

<http://oldtown.glendon.yorku.ca/~teaching/2023/huma2655/hw1/audio/segment-mm.wav>

(1)

which was obtained (edit in Audacity) from the longer segment (music):

http://oldtown.glendon.yorku.ca/~teaching/2023/huma2655/hw1/audio/vocals_ballad_part.wav

(2)

[a] Chorus rendering of Fred Mercury

Make a chorus rendering of Fred Mercury singing in 3 voices from segment (1)

[b] Mix and render

Display your final chorus rendering at your web site:

THE END

(Related reading on next pages)



Computer music

MODR/human/Itec 2655

Open-Book & Open-Internet

We wish to slow down/speed up music tempo (of a piano performance) by computer algorithms.

Reading:

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[1]	Change tempo of a music video.....	4
[2]	Display your slow video (format mp4) at:	5
[3]	Also display your slower music as a web page (use video embed) at:	5
Question 2	More exercise on “changing tempo” for music videos.....	5
Question 3	Given the music video at:	5

Suggestion: You may want to view [the video](#) given in Question 2 first. See Page 2 for class readings.

Question 1 [Change tempo](#)

[1] Change tempo of a music video.

(i) [Audacity](#) is an audio editor while [Avidemux](#) is a video editor

(ii) We need to process audio and video tracks separately, and then put them back together to achieve perfect synchronization which is required in music education.

- | | |
|----|---|
| a. | To speed up/slow down audio, use the " bpm or beats per minute " effect in Audacity. |
| b. | To speed up/slow down video, use " fps or frames per second" filter in Avidemux |

(iii) For AVIDEMUX:

Change FPS = change duration of video.

Resample FPS = change and enforce FPS. Keep duration and sync.

(iv) For Audacity:

Change BPM = change duration of audio

We can download and install Avidemux and Audacity at your local device

at: <http://oldtown.glendon.yorku.ca/~teaching/binary/>

- | |
|---|
| • You can also use Audacity and Avidemux on-line as chrome extension plugins. |
|---|

Given the video at: http://oldtown.glendon.yorku.ca/~teaching/2021/videos/imagine_2020.mp4



that plays “Imagine” by Lennon at tempo.

Create a new video, named slow.mp4, which plays at 90% tempo of the video above. Here is a screen capture of [the output video format](#) suitable for streaming.

[2] Display your slow video ([format mp4](#)) at:

<http://oldtown.glendon.yorku.ca/~lastname/video/lennon/slow90.mp4>

[3] Also display your slower music as a web page (use video embed) at:

<http://oldtown.glendon.yorku.ca/~lastname/video/lennon/imagine.html>

Question 2 More exercise on “changing tempo” for music videos.

View the video [here](#).

Please describe the steps taken and its purpose.

Question 3 Given the music video at:

Readings:

- Audacity to make music ([PDF](#))