COMP335 Web Application Development – Assignment3

Implement a webpage to play a video automatically when the video is in the current viewport (like Facebook's video AutoPlay feature).

- You can work individually or in pairs (no larger groups). I accept only one submission per group, and require all team members' names appear atop `assignment3.html` in an HTML comment.
- Rendering may vary among browsers even for the same web page. I will only test your work from Chrome. You will not get full credit if it doesn't work in Chrome (even if it works in other browsers).

Preparation

Stumped? Feel free to ask for help from classmates, your partner, or me.

1. Visit this link and run the code inside: https://developers.google.com/youtube/iframe_api_reference Once you successfully run the sample code, you should be able to see a video (You can find `step1.html` from BlackBoard)
2. Replace the existing `videoId` with `videoId`: `'6CGyASDjE-U'` If you did it right, you should see a fun video (`step1.html`)
3. Open `assignment3.html` as posted on BB. You will need to create a new file (`assignment3.js`) and add all JavaScript portion into the file. If you did it right, you have two files: `assignment3.html` and `assighemt3.js`. You should be able to see the new video running between two big paragraphs.
4. Understand how the code works before moving on. The webpage's source includes an explanation. Examine the DOM (Chrome→Inspect) to understand the code. I encourage discussion with your partner or classmates.

Implementation (10 points total)

This part should be done only with your partner or alone.

Expectations:
DO NOT share your code with other teams or classmates (that is academic dishonesty).
YOU MAY discuss how code from StackOverflow or the web works with anyone from the class.
DO NOT discuss how to adapt code from the web into a solution (except with your partner).

- (4 points) When you open the webpage, the video should not start automatically. Instead, the video will start once you scroll through the page.
  Hint: `window.addEventListener('scroll', function);`

- (6 points) Play the video only if the video is in the viewport. If the video is not fully visible (out of viewport), then the video should stop. If the video enters the viewport, it should resume. To simplify the code, we will only consider scrolling down/up, not left/right.
  Hint: `player` object has `playVideo()` and `pauseVideo()` methods
  Hint: Consider using `getBoundingClientRect()` method. The following link will help:
  http://stackoverflow.com/questions/123999/how-to-tell-if-a-dom-element-is-visible-in-the-current-viewport

Note that I had less than 10 lines additional code to make this work. The key is to understand the existing code and the hint from stackoverflow properly.