Web Application Development – Assignment3

YouTube Player API Reference for `iframe` Embeds

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 a top `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). If you did it right, you should see a fun video (`step1.html`)
2. 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.
3. 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): Play the video only if the video is in the viewport.
This part should be done only with your partner or alone.

Expectations:
DO NOT share your code with other teams or classmates (read academic dishonesty policy).
YOU MAY discuss how code from StackOverflow or the web works with anyone from the class.

- When you open the webpage, the video should not start automatically. Autoplay is only allowed when approved by the user. Otherwise, media is muted (This restriction is done by Browsers). Once you activate the video, the video will start (`step1.html`).

  If the video is not fully visible (out of viewport), then the video should stop. If the video enters the viewport, it should resume. Once you scroll through the page, the video will be either inside viewport or outside viewport. To simplify the code, we will only consider scrolling down/up, not left/right.

  Hint: `window.addEventListener('scroll', function);`
  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 the above link (stackoverflow) properly. Note that you only need top and bottom.