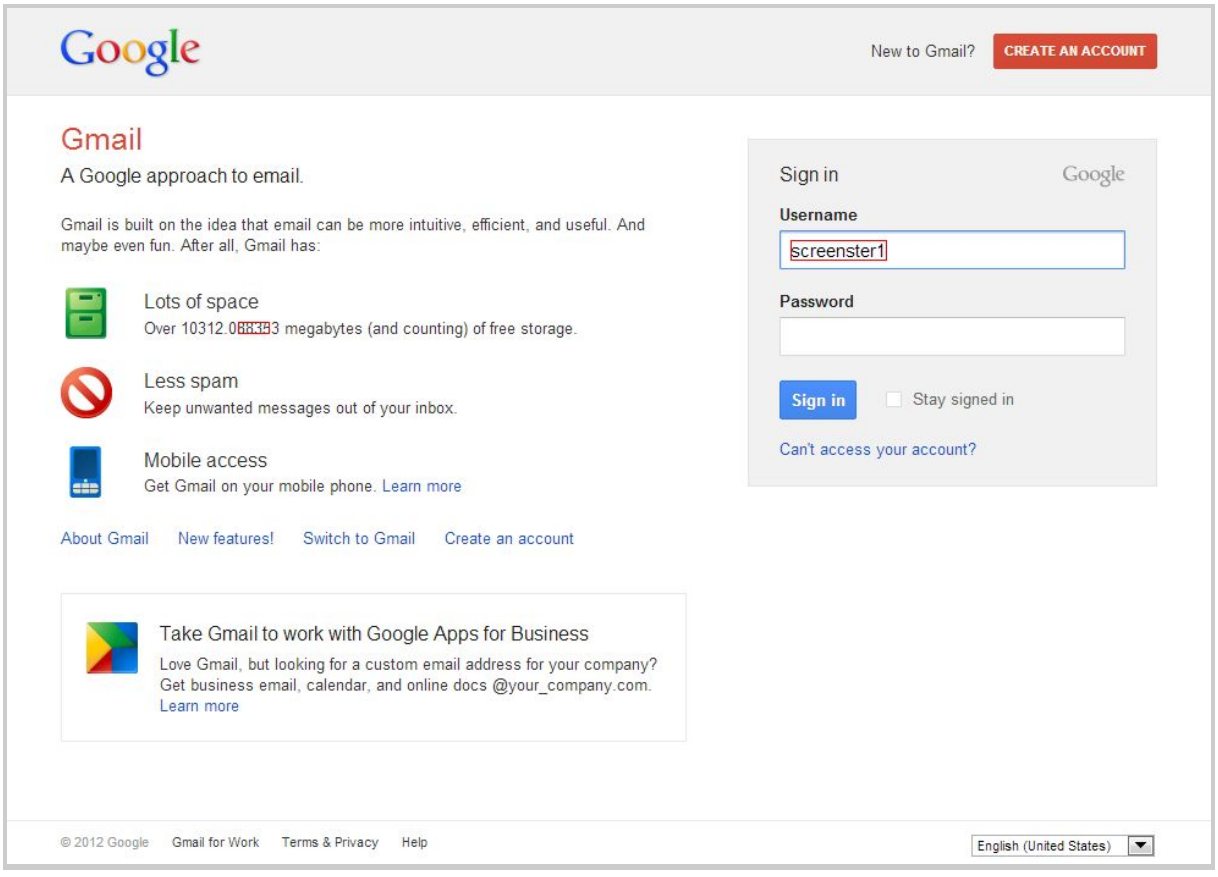
Image Comparison Requirements

Must have

1. Write a program in Java or C# that compares any 2 images and shows the differences visually.
2. Implementation should use only standard core language and platform features, no 3rd party libraries and plagiarized code is permitted.
3. Pixels (with the same coordinates in two images) can be visually similar, but have different values of RGB. We should only mark pixel as "different" if difference between them is more than 10%.
4. Differences should be shown as a generated output image with different regions outlined with red rectangle as shown below.
5. We need to see your own code. No third party libraries and borrowed code is allowed.
6. Task needs to be completed in 2 hours. Be sure to submit whatever you are able to accomplish 2 hours from the receipt of the requirements to avoid being disqualified.



Nice to have

1. It should be possible to exclude certain parts of the image from comparison, for example a clock or dynamically generated number. They will be provided by the caller as a list of rectangles to exclude.
2. Provide some sort of UI either as a web page or GUI that allows the user to select the images and view differences as an overlay on either of the images.

Expected Deliverables

1. Source code.
2. Binary version of the algorithm that runs and produces output of comparison. No build should be required.
3. Output image showing the result of comparison.