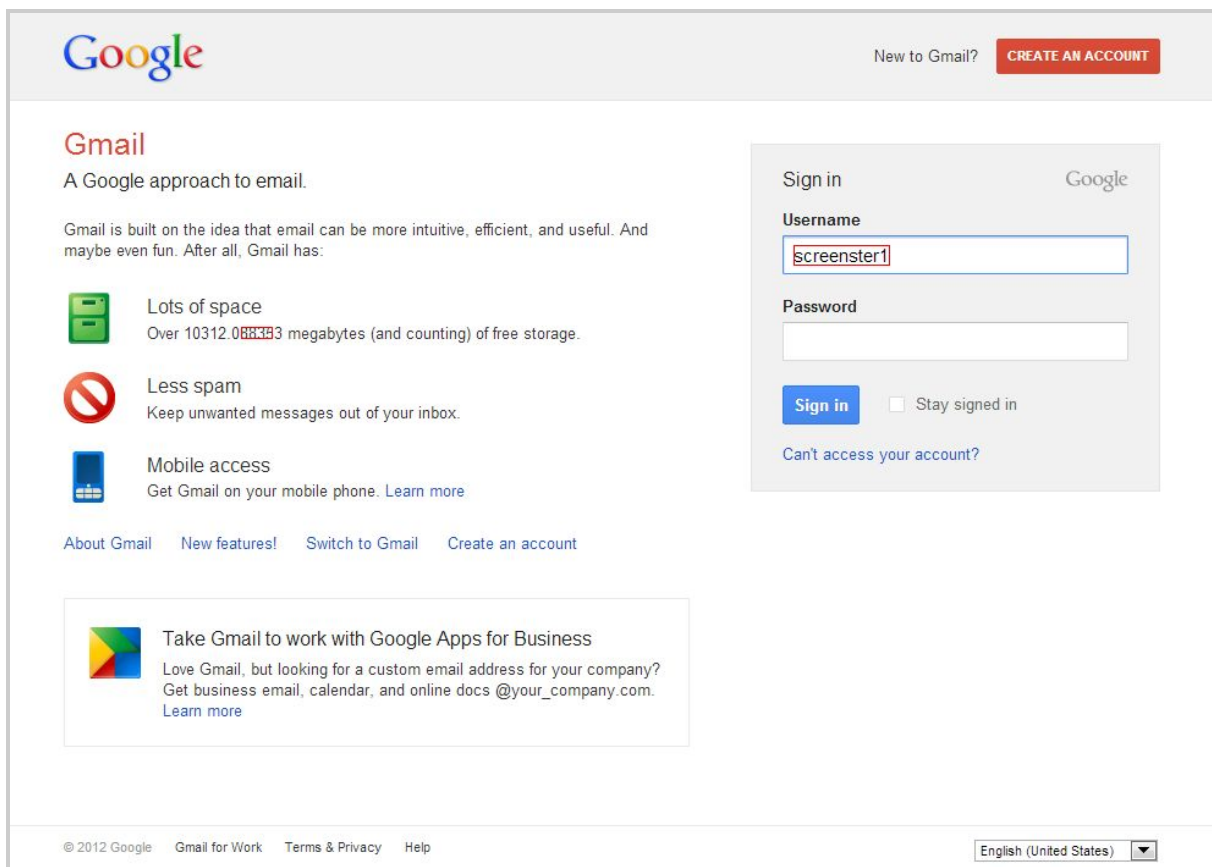


Image Comparison Requirements

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.



The image is a screenshot of the Gmail sign-in page. At the top, the Google logo is on the left, and 'New to Gmail?' with a 'CREATE AN ACCOUNT' button is on the right. The main heading is 'Gmail' with the tagline 'A Google approach to email.' Below this, a paragraph states: 'Gmail is built on the idea that email can be more intuitive, efficient, and useful. And maybe even fun. After all, Gmail has:'

Three features are listed with icons:

- Lots of space:** Over 10312.088393 megabytes (and counting) of free storage.
- Less spam:** Keep unwanted messages out of your inbox.
- Mobile access:** Get Gmail on your mobile phone. [Learn more](#)

At the bottom of this section are links: [About Gmail](#), [New features!](#), [Switch to Gmail](#), and [Create an account](#).

On the right side, there is a 'Sign in' section with the Google logo. It contains a 'Username' field with the text 'screenster1' inside, a 'Password' field, a 'Sign in' button, a 'Stay signed in' checkbox, and a link 'Can't access your account?'.

At the bottom of the page, there is a footer with copyright information: '© 2012 Google', links for 'Gmail for Work', 'Terms & Privacy', and 'Help', and a language selector set to 'English (United States)'.

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.