Instructions for Offline Assessment

You are expected to propose an efficient algorithm to solve the task. You need to provide a report that includes the following:

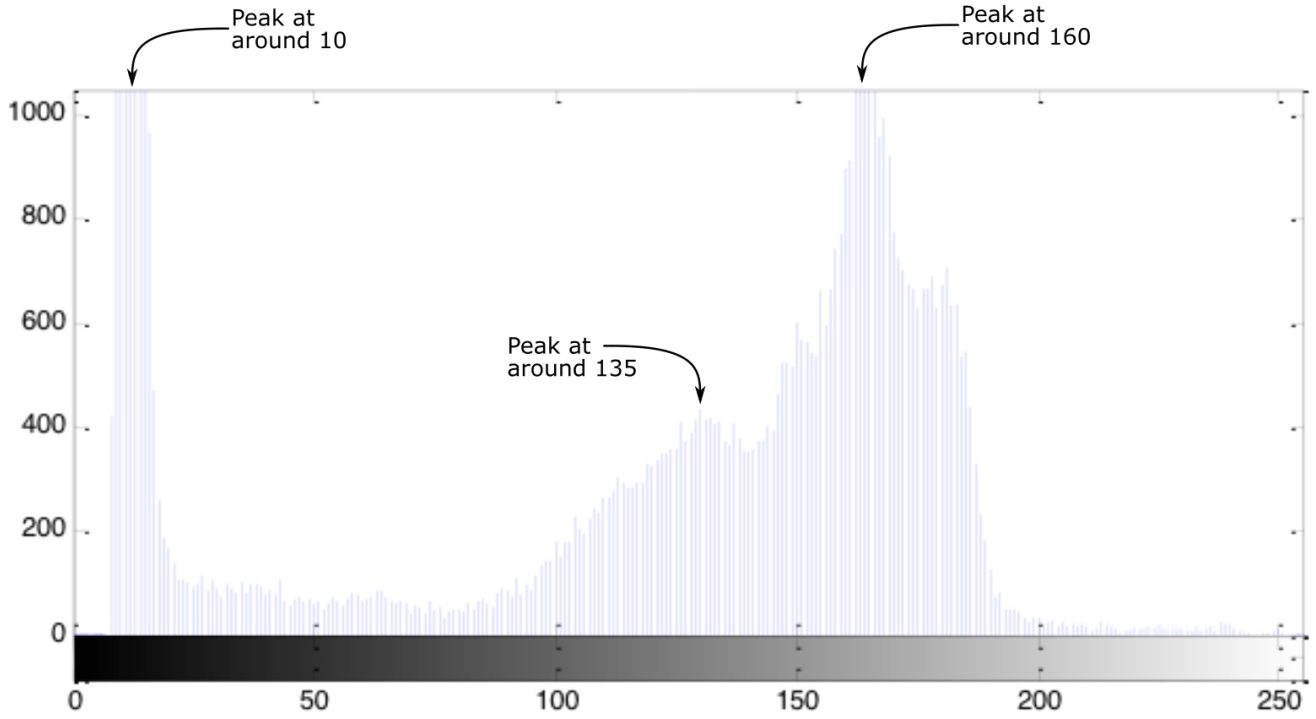
- A detailed and explicit description of the proposed method. You might want to include some of the following points:
    - Why did you pick that method?
    - If you are using a 3x3 filtering kernel, why did you pick 3x3 or what are the values in the kernel and why?
    - If you are going to use a well-known technique, you need to describe it explicitly (e.g. if you are using a Gaussian Mixture Model, your description of the method should provide an explanation of it and how exactly you would be using it, rather than just saying 'I would use a GMM')
- An actual implementation or a pseudo-code of the method

Everything you provide must be your own work.

Image Histogram

Below is a greyscale image and its corresponding histogram.

Observe that the histogram has three major peaks, at values of approximately 10, 135, and 160. These are not the largest values in the histogram, but each is a **dominant peak** of this histogram.



Propose an algorithm to find the locations of the **dominant peaks** of this histogram or others like it. Your algorithm should take as input an array of length 256, and must produce only a single value per-peak.