**Grading**

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| **Section** |  | **Grade** | **Comments** |
| **3 a** | **run and submit the results (10 points)** | **10** |  |
| **4 b** | **Put your name and date in the comment area under “Modified by:” (5 points)** | **5** |  |
| **4 c** | **Re-implement the function histogram() to kernel function with new name gpu\_histogram() (45 points)** | **45** |  |
| **4 d** | **Modify the main method so that the code will work on GPU. The modifications include. Here is the distribution of the points: (45 points)** |  |  |
| **4 d i** | **Declare some GPU pointers dev\_text\_data of char and dev\_histo of unsigned int. (5 points)** | **5** |  |
| **4 d ii** | **Allocate cuda memory for the pointers (5 points)** | **5** |  |
| **4 d iii** | **Copy the array data from host to device (5 points)** | **5** |  |
| **4 d iv** | **Call the kernel function for computing the frequency histograms of characters (10 points)** |  |  |
| **4 d v** | **Add code to display the frequency histograms of all the alphabets (both low and up cases). Also add code to display the relative frequency histogram of all the alphabets in terms of percentiles. Please run the code for input file input\_test.txt.**  **As the results for input\_test.txt are displayed in section 3 above, you can use the input data to verify that your GPU code is working. As I mentioned before, both CPU and GPU versions should generate the same results for the same test data. (20 points)** | **20** |  |
| **4 d vi** | **Run the code again for input\_data.txt and display the results.** |  |  |
| **4 e** | **Modify the comments for the code you have changed. (5 points)** | **5** |  |
|  | **Total** | **110** |  |