

CS161FZ Introduction to Computer Science

Lab Assignment 8

There are *two* tasks to be completed.

General Information:

- Use variables instead of literals in your programs.

Task 1: Histogram Printer

Histogram is a commonly used graphical representation of the distribution of numerical data in statistics. Given a series of numbers, write a complete computer program to print the histogram of the occurrences of each digit to the screen.

For example, given a series of numbers:

1022473578476949426110832338899437170338449409627474102214022150928

Expected Outputs: (Separate each column using two empty spaces).

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          [4]
        [2] [4]
        [2] [4]
        [2] [4]
[0] [1] [2] [3] [4]          [7]          [9]
[0] [1] [2] [3] [4]          [7] [8] [9]
[0] [1] [2] [3] [4]          [7] [8] [9]
[0] [1] [2] [3] [4]          [7] [8] [9]
[0] [1] [2] [3] [4] [5] [6] [7] [8] [9]
[0] [1] [2] [3] [4] [5] [6] [7] [8] [9]

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Task 2: Eliminate Duplicates

Write a complete computer program that eliminates duplicate values in a given array of integer numbers (containing only non-negative numbers). Your program should print all distinct numbers to the screen in the order of their appearance in the list below. (Use an empty space to separate values)

96, 91, 75, 22, 77, 46, 73, 87, 66, 46, 19, 55, 65, 21, 83, 8, 73, 80, 90, 52, 72, 51, 2, 22, 4, 8, 51, 66, 36, 82, 68, 61, 74, 64, 72, 24, 21, 46, 63, 23, 93, 44, 40, 24, 78, 15, 85, 61, 18, 40, 3, 40, 27, 58, 81, 56, 73, 5, 15, 38, 83, 91, 19, 92, 79, 66, 45, 62, 45, 93, 66, 12, 25, 60, 65, 48, 18, 60, 17, 21, 61, 74, 44, 65, 50, 88, 88, 43, 5, 7, 96, 3, 95, 18, 64, 74, 92, 88, 62, 52, 32, 96, 75, 78, 11, 16, 41, 33, 5, 12, 26, 10, 90, 5, 77, 91, 69, 35, 14, 73, 54, 56, 74, 56, 48, 50, 7, 47, 44, 81, 13, 15, 39, 65, 74, 32, 71, 58, 67, 81, 30, 52, 69, 99, 67, 83, 49, 34, 7, 31, 32, 58, 26, 62, 53, 56, 63, 7, 59, 58, 68, 45, 45, 22, 49, 35, 28, 91, 62, 0, 37, 92, 17, 64, 12, 84, 91, 87, 47, 13, 51, 75, 8, 62, 45, 63, 11, 46, 85, 34, 51, 50, 76, 46, 25, 64, 49, 9, 7, 33

Example Output:

96 91 75 22 77 46 73 87 66 19 55 65 21 83 8 80 90 52 72 51 2 4 36 82 68 61 74
64 24 63 23 93 44 40 78 15 85 18 3 27 58 81 56 5 38 92 79 45 62 12 25 60 48 17
50 88 43 7 95 32 11 16 41 33 26 10 69 35 14 54 47 13 39 71 67 30 99 49 34 31 53
59 28 0 37 84 76 9