Homework 1

100 points

Due date: 2/6/2020 - 11:59 pm

Deliverable: Submit a Python file (.py) for each question. Name the files as hwX-qY.py where X is the homework number and Y is the question number. For example, for the first question your file name should be hw1-q1.py. Follow the exact naming policy. Otherwise, you get zero. Your TA uses scripts and test cases to automate grading your codes. Wrong naming will interrupt this process.

Rubric:

1- Do not use topics which were not covered in the class to solve the questions. For example, **you are not allowed** to use conditional statements (if statement) or loops to solve homework1 questions.

2- You get no points If the TA cannot run your code. This may happen because of a syntax error or a wrong file name.

3- Make sure that your codes outputs are similar to the examples.

1- Create a Python script that asks for user's name and age. It then prints out a message with user's name and the year in which the user was born. See the following example. **(20 points)**

You need to use **format()** function to decorate the outputs.

What is your name:

Bob

How old are you Bob?

18

Bob was born in 2002

2- Write a Python script to get a string and prints out another string made of the first 2 and the last 2 chars from the given string. **(20 points)**

For example:

Please enter your string:

Hi, this is Alice.

The new string is ‘Hie.’

3- Write a Python script to get a string from user and prints out the number of occurrences of the first character in the string. It then prints out a new string where all occurrences of the first char have been changed to '*', except the first char itself. **(25 points)**

For example:

Please enter a string:

cute cat in the car

‘c’ has been repeated 3 times.

cute *at in the *ar

4- Write a Python scripts to get a sequence of different positive numbers from user (in one line separated by single space) and prints out a list including all the number’s digits in descending order. It then prints out what the max digit is and how many times it has been repeated in the original input. **(35 points)**

For example:

please enter a sequence of positive digits separated by single space

111 202 872 678 939 190 319 5 25 67 14

The list of sorted digits in descending order is

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

Max is 9. It has been repeated 4 times