

day47 review 1

Due: 6th period, Thursday 12/8
7th period, Friday 12/9

This is a review assignment to prepare you for the final exam.

In the final exam I will have you write a program on repl. Doing all of the things in this review assignment will help you do well on the final.

Today's task has four parts:

Part 1:

Print your name, then a blank line, then "Part 1:", then write a program that asks the user for a positive integer greater than your age using a try/except structure. Print two different error messages, one if they don't enter an integer and a different one if they enter an integer less than your age. Once the user enters a number larger than how old you are, print a series of stars, going from 1 star up to the number of stars the user entered, where you print the current number, then print that number of stars on the same row.

Here is a sample output:

Mr. Hays

Part 1:

```
Please enter a number larger than 15: howdy
It has to be an integer. Please try again.
Please enter a number larger than 15: 5
It needs to be larger than 15. Please try again.
Please enter a number larger than 15: 16
```

```
1 *
2 **
3 ***
4 ****
5 *****
6 *****
7 *****
8 *****
9 *****
10 *****
11 *****
12 *****
13 *****
14 *****
15 *****
16 *****
```

Part 2:

Print a blank line, then print "Part 2:", then add to your program as follows:

Create a list variable named "myList" that has the following contents: [3, 14, 6, 7, 12]

Print the list as given, print it sorted, print out the maximum value, the minimum value, the average, and the sum of the even numbers in the list.

(continued on next page)

Do this programmatically, that is, don't add a print line that says "print(3)" to print the minimum value. Write code to do these things that don't depend upon the exact numbers in this exact list. In other words, write code that will do this no matter what values are actually in the list.

Make it all print out nice like this:

Part 2:

```
The list:      [3, 14, 6, 7, 12]
Sorted:      [3, 6, 7, 12, 14]
Max value:   14
Min value:   3
Average:    8.4
Sum of evens: 32
```

Tips: To find the average of a list, you can use the sum(myList) call to get the sum, then divide that number by len(myList) which is the number of items in the list. To find the maximum value of a list, use the max(myList) call. The minimum value can be found using min(myList). Remember to sort a list you use the .sort() method. To find the sum of the even numbers in the list you'd need to do a for loop to go through all the items in the list and add up the ones that are even. (Remember, you can tell if a number is even by using the % command.)

Part 3:

Print a blank line, then "Part 3:", then create a new, empty list. Using code, fill the list with 20 random integers from 5 to 15 (use random.randint(5,15) and the list append call to do this.) Then print an arrangement of dollar signs (\$) centered on 20 spaces using the numbers your program put into the list. The output should look like this (except with random numbers of \$s, obviously):

Part 3:

```

$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$
    $$$$$$
    $$$$$$
  $$$$$$$$$$
  $$$$$$$$$$
  $$$$$$$$$$
  $$$$$$$$$$
$$$$$$$$$$$$$$$$
  $$$$$$
  $$$$$$$$$$
  $$$$$$
  $$$$$$
$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$
  $$$$$$
  $$$$$$
  $$$$$$
```

See next page for part 4.

Part 4:

Print a blank line, then print the numbers 6 through 85 in 5 columns with tabs between the numbers, except whenever a number is divisible by 7, print two dollar signs instead of that number. See sample output here:

6	\$\$	8	9	10
11	12	13	\$\$	15
16	17	18	19	20
\$\$	22	23	24	25
26	27	\$\$	29	30
31	32	33	34	\$\$
36	37	38	39	40
41	\$\$	43	44	45
46	47	48	\$\$	50
51	52	53	54	55
\$\$	57	58	59	60
61	62	\$\$	64	65
66	67	68	69	\$\$
71	72	73	74	75
76	\$\$	78	79	80
81	82	83	\$\$	85

Call me over to check you off when you are done with everything. Unless you have a sub (6th period), in which case just make sure your program is running, then turn it in. Use the help video if you are having trouble. If that is not enough help, ask a classmate if they might be able to help you figure out what is wrong. Finally, if you are not able to get things working, turn in your program and leave me a private comment in the Google Classroom.

If this is 7th period, call me over to help. Do not turn in a broken program. Thanks.