Introduction to Programming W4

Iteration and expressions II.

2022/04/29

Exercises

Complete the programs based on the instructions and the comments. Students do not need to include the instructional comments (if there are any), but encouraged to use their own words to explain the code in detail. Do not forget to create/complete the appropriate file headers for your code.

Exercise 4.1

Write a program with conditionals that prints the grade of the student based on the following criteria: 90 or more points: A+, 80 or more points: A, 70 or more points: B, 60 or more points: C, below 60 points: F.
Submit the .py file in manaba R+. Name the file the following way: ip_ex41_<student id number>.py.

```
points = 87
#write your conditionals here
```

Exercise 4.2

The code in Section 1 (Conditional statements) which checks if a number is positive, zero or negative actually does not need nested conditional statements. Rewrite it without conditional nesting, using `if`, `elif`, and `else` statements.
Submit the .py file in manaba R+. Name the file the following way: ip_ex42_<student id number>.py.

Exercise 4.3

Complete the following code so it adds up all even positive numbers up to 300 (number 300 is included) and prints it.
Hint: don't forget to increment `number` at the correct indentation level.
Submit the .py file in manaba R+. Name the file the following way: ip_ex43_<student id number>.py.

```
number = 1
total = 0

while number #complete the while header
    if (number % 2) == 0: #checking if the number is even with the modulo operator


print(total)
```

Exercise 4.4

Complete the following code so that it iterates through the two lists of numbers parallel, and adds up their same-index values one-by-one. In case the sum (variable `summa`) is more than 25, `break` out of the loop.
Submit the .py file in manaba R+. Name the file the following way: ip_ex44_<student id number>.py.

```
number_list_1 = [1,2,3,4,5,6,7,8,9,10,11]
number_list_2 = [10,11,12,13,14,15,16,17,18,19,20]

print("Length of the first list:", len()) #check the length of the first list
print("Length of the second list:", len()) #check the length of the second list
for number_1, number_2 in zip(): #iterate through the two lists!
    summa =  #complete to add up the same-index values
    print("The sum is", summa) #print the sum
    if summa  #complete to check if summa is more than 25, and in that case, break out of the loop
```