Introduction to Programming W3

Iteration and expressions I.

2022/04/22

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 (W2 class material) for your code! As a reminder, the following automatically results in 0 points:

1. submitting code in different format
2. not including all parts of the header
3. submitting a file with a different file name as required
4. output is correct, but instructions are not followed

Exercise 3.1

Create a list of your favorite foods (4 elements), and use a for loop to print food in a new line. Finally, use the format method to complete the given sentence, by picking the second element from your list using indexing.

Submit the .py file in manaba R+. Name the file the following way: ip_ex31_<student id number>.py, for example: ip_ex31_012345678-9.py

```
#!/usr/bin/env python
# -*- coding: utf-8 -*-
"""

Author: student name
Student ID: student id number
Program description: The description of the program with your own words
"""
fav_foods = #list data structure containing your 4 favorite foods
for food in
    print()

#use the format method and indexing to insert the second element from your food list!
#remember that indexing starts from 0
print('One of my favorite food is {}'.)
```

Exercise 3.2

Complete the program using the `range()` function an its arguments to print the multiples of 3 in new lines, starting from 3 up to 18. Submit the .py file in manaba R+. Name the file the following way: ip_ex32_<student id number>.py.

```
#!/usr/bin/env python
# -*- coding: utf-8 -*-
"""
Author: student name
Student ID: student id number
Program description: The description of the program with your own words
"""

for i in range ():
    print()
```

Exercise 3.3

Complete the following code using a while loop to check how many times a number can be raised to the power of 2 before it reaches 100000. Submit the .py file in manaba R+. Name the file the following way: ip_ex33_<student id number>.py.

```
#!/usr/bin/env python
# -*- coding: utf-8 -*-
"""
Author: student name
Student ID: student id number
Program description: The description of the program with your own words
"""

iterations = 0
number = 4
#next is the while loop where it has to be checked if number is still below 100000 or not
while number <
    #printing the number to check its value
    print()
    #raise the number to the power of two (reassign the number variable)
    number = 2**number
    #next, increment the variable called iterations
    iterations

print("It took this many iterations:")
print(iterations)
```