CS2020
Introduction to Programming
Practice Exercise Set 1

Basic Loops

For each question, write solutions using for and while loops, unless indicated otherwise. It should take no more than a few minutes to compose each loop. Do not use any data structures such as lists in this exercise set.

Practice Topics

- while
- if
- range

Prerequisite

You need to possess knowledge on

- Basic operations such as assignments and expressions.
- Input and output (print)
- Data types int, float, and str.
- Simple selection control using if-else.

Example

Print out integers from 1 to 10, inclusive.

```
for i in range(1,11):
    print(i)


i = 1
while i < 11:
    print(i)
    i += 1
```

1. Print out integers from 5 to 15, inclusive.

2. Print out odd integers from 1 to 25, inclusive.

3. Print out integers divisible by 5 starting from 10 and ending with 100.

4. Print out the message Hello 10 times, one message per line.

5. Print out the message Hello 0, Hello 1, Hello 2, . . . , Hello 20, one message per line.

6. Compute and print out the sum of integers between low and high. Assume the values are already assigned to low and high, and low is less than or equal to high.

7. Find and print out how many numbers are divisible by 7 between two integers low and high. Assume the values are already assigned to low and high, and low is less than or equal to high.

8. Find and print out how many numbers are divisible by both 7 and 5 between two integers low and high. Assume the values are already assigned to low and high, and low is less than or equal to high.

9. Compute and print out the sum of integers between num1 and num2. You do not know which one is larger.

10. Input 10 float numbers. Compute and print out their sum and average.

11. Using while, input float numbers until 0 is entered. Compute and print out their sum and average. Do not include the terminator value 0 in the computation.

12. Using while, input integers until 0 is entered. Find and print out how many of them are even integers.

13. Using while, input integers until 0 is entered. Compute and print out the sum of the odd integers.

14. Using while, input integers until 0 is entered. Find and print out the maximum and the minimum of the integers read.

15. Using while, input integers until 0 is entered. Find and print out the maximum and the minimum of the integers read that are divisible by 5.