

## Oblig: 5

### 1.1

$$C = (4+2) / 2$$

$$C = 3$$

$$3^2 = 9$$

### 1.2

The first list of numbers printed will output:

[0, 1, 2, 3, 4]

Since for x in range(5) will start at 0 and continue until the loop has looped 5 times it will add the numbers above to the list.

The second print output will be:

[0, 0, 0, 0, 0]

This is the output because inside the for x in range(5) loop it uses -insert instead of append. In this case numbers.insert(x, 0) so it will iterate through the list and add "0" to every index inside the list.

### 1.3

The class is used to create an object that can store a name, the number of students and the study points. The class contains a class method that returns these values. The print output will be something like this: "The course Programming 1 has 215 students and 10 study points."

### 1.4

The output of this code will be "Honey Badger" and "Giraffe". Since both key's values are less than 5. Also, the .title string method makes the first letter in the strings capital.

### 1.5

The output is "8".

### 1.6

First, we replace "giraffe" in the list with "elephant". Then we sort the list alphabetically. Then we set the list to be equal to the original list but sliced by 0:2. This means that only the first two animals in the list will remain. The for loop then prints the animals left in the list. Output: "ape" and "elephant"

## 1.7

Once the list is created we slice it in a way where we remove the first animal and keep only the second and third animal. After that we set the first animal left in the list to be "Alligator". Finally, we sort the list alphabetically but reversed. The output: ['Cat', 'Alligator']

## 1.8

We create a dictionary to contain all the key → values for a shopping list. Then we make a function for checking whether the key is already in the dictionary. If it is, add the specified quantity to the key in the dictionary. Otherwise, we set the quantity to 1 or += 1. The output for this code will be: {'Bread': 4, 'Milk': 3, 'Eggs': 1}

## 1.9

First  $x = 6$

Second  $x = 10$

The first for loop starts at index 0 and continues to 5 with a step of 2. This means it will "jump over every second index: (0), 1, (2), 3, (4), 5. Finally it adds  $0 + 2 + 4 = 6$ .

The second loop starts at 0 and continues until it has looped 5 times. So: 0, 1, 2, 3, 4. Each loop it adds the index value to the variable "i" ( $x += i$ ).

1:  $0 + 0 = 0$

2:  $0 + 1 = 1$

3:  $1 + 2 = 3$

4:  $3 + 3 = 6$

5:  $6 + 4 = 10$

Hence the second loop's output is 10.

## 1.10

25

26

27

13

The first output will be 25 since  $5^2 = 5 * 5 = 25$

The second output will be 26 because the sum left after  $5 \% 2 = 1$ . The 25 from previous output + 1 is 26.

The third output will be 27 because:

$$26 + 5 - 2 * 2 = 26 + 5 - 4$$

$$26 + 1 = 27$$

The fourth output will be 13 because:

$27 // 2$  divides 27 by two and then rounds down the answer to an integer.

$$27 / 2 = 13.5$$

$$27 // 2 = 13$$

### 1.11

The first print output will be: "12"

This is because the `game1.age_rating` accesses the `age_rating` value inside the object which earlier was set to 12.

The second output will be: "The game God of WAR is of the genre Action and has an age rating of 18"

It prints this because the `description` class method prints the name, genre and `age_rating` (which is 18 by default). When `game2` object was instanced from the `Game` class, the values "God of War" and "Action" was used as arguments in the `Game` class parameters. The `age_rating` argument in the class parameters is by default 18, so it was not necessary to add it to the object when it was instanced from the `Game` class.

### 1.12

The output will be "A ValueError occurd." Twice since there are two strings in the list. The rest of the integers in the list however will be added to the "result variable. Therefore, the print at the end of the program will output: "The sum is: 6"