Assignments Programming Course Week 1

Create a new file per assignment, called assignment_1.py, assignment_2.py, and so on. Each file should be able to be executed like so:
`python3 assignment_1.py`

Assignment 1

Create two variables (a and b) with values 5 and 11. Using the "most modern" formatting rules, print the result of a / b and a * b in a single string. The output should be:

```
a / b: 0.4545 - a * b: 55
```

Assignment 2

Write a program that uses a while loop that runs 10 times. The program should have a variable `loop = 10` and a variable `index = 0`.

Every time the index is *even* the program should output the number. The operand to find out if a number is even called *modulo* and is represented by the `%` symbol. Use google to find out how to use the module operator.

The output of the function should be:

```
0
2
4
6
8
```

Assignment 3

Write three functions:

- sum, with two parameters (a and b), which returns the sum of a and b.
- div, with two parameters (a and b), which returns the result of a divided by b.
- times_three, with one parameter (a), which returns a multiplied by 3.

Then write a program that contains three variables: x = 3, y = 5, z = 2. Then it should use the sum function with parameters x and y. Store the result in a variable. Then run the div function with that variable and z. Store the result in another variable. Then run times_three on that variable and print the result. The output should be:
`12.0`

Assignment 4

Initialize a list with 20 numbers like so: `my_list = list(range(0, 20))`
Then reverse the list and store the result in a new variable. Make sure the original `my_list` variable remains unchanged.

Then take the first 5 numbers and the last 5 numbers of the reversed list and store them in a new variable. Print that variable. The result should be:

```
[19, 18, 17, 16, 15, 4, 3, 2, 1, 0]
```

Hint: you can concatenate two lists with the + operator. For example:

```
print([1, 2] + [3, 4]) # outputs [1, 2, 3, 4]
```