Bloomberg STARTUP

Week 1 In-class Exercises 2

1) Write code that does the following.

a. Create a variable and store your favorite number in it. First double your number, then add 7 to it, then print the result.
b. Store any string in a variable, then print your string concatenated (added) to itself 10 times. Is there a fast way to do this?
c. Create two variables and store numbers in them. Compute their sum and their product and store them in appropriate variables. Print the results in complete sentences, for example: "The sum of 5 and 7 is 12."
d. Create three variables x, y, and z and store integers in them. Compute x+y*z and explain the result.
e. Create five variables a, b, c, d, e and store integers in them. Write an expression using each of the five operations: addition (+), subtraction (-), multiplication (*), division (/), and exponentiation (**) and at least one set of parentheses and store it in a variable. Does the variable have the value you expected?

2) Use the first five variables to write expressions for those remaining. Then execute the print statements below. Afterward, try changing the variables around to see how the output changes.

```
trains_total = 30
trains_broken = 3
cars_per_train = 11
space_in_a_car = 175
passengers = 60000
trains_in_operation =
train_capacity =
total_capacity =
average_passengers_per_car =
```

```
print("There are", trains_total, "trains available.")
print("There are only", trains_in_operation, "trains working.")
print("There is room for", train_capacity, "people on each train.")
print("There is room for", total_capacity, "total people on all the trains.")
print("There are", passengers, "people who need to take the train.")
print("We need to put about", average_passengers_per_car, "in each car.")
```