Week-1, Practice Assignment (programming) Solution

Problem-1

Question

Print the following lines in Python

```
89074562
Hii!!
$$Howareyou??
10*10 = 100
(12 > 10) and True
I am here to learn "python"
```

Answer

```
print('89074562')
print('Hii!!')
print('$$Howareyou??')
print('10*10 = 100')
print('(12 > 10) and True')
print('I am here to learn "python"')
```

Solution

The print method displays what is given inside it on the console. After displaying the output, the control goes to the next line by default. That's why each line is printed on the new line.

Problem-2

Question

Print the following pattern.

```
$
$ $
$ $ $
$ $ $ $
$ $ $ $ $
```

Note: There is a single space between two $

Answer

```
print('$')
print('$ $')
print('$ $ $')
print('$ $ $ $')
print('$ $ $ $ $')
```

Solution

Self explanatory.

Problem-3

Question

Accept a string as input. Make a copy of this string. Insert the exclamation mark (!) before and after the copy and print this final string to the console.

Test Cases

Public

Input	Output
cool	!cool!
123567	!1234567!

Private

Input	Output
a	!a!
!	!!!

Answer

```
string = input()
output = '!' + string + '!'
print(output)
```

Solution

First, we read the input in a variable called `string`. We append '!' before and after the input string. This is stored in the variable `output` and is printed on the console.

Problem-4

Question

Accept an integer x as input. Find the quotient when 3^{35} is divided by x and print the output.

Test Cases

Public

Input	Output
10	5003154509899970
100	500315450989997

Private

Input	Output
300	166771816996665
2	25015772549499853

Answer

```
x = int(input())
print(3 ** 35 // x)
```

Solution

An integer is read into a variable `x`. 3^{35} is equivalent to the expression `3 ** 35`. In order to get the quotient `//` operator is used. The final output is printed.

Problem-5

Question

Accept a string as input. Print the string obtained by removing the first and last letters. For example:

Input

```
peace
```

Output

```
eac
```

Assume that there will be at least three characters in the input string.

Test Cases

Public

Input	Output
Rain	ai
abcdefg	bcdef

Private

Input	Output
12345	234
aaaaa	aaa

Answer

```
string = input()
output = string[1 : -1]
print(output)
```

Solution

The solution uses string slicing operation. Input string is read into the variable `string`. The index in a string starts at `0` and goes up to `len(string) - 1` when we move from left to right. Conversely, the index starts at `-1` and ends in `-len(string)`, if we move from right to left. Therefore, `string[1 : -1]` gives a substring starting from second character and ends in second last character skipping first and last character (Remember: from the lecture we know that the end position of slicing is not inclusive).