

# Python Programming

Homework Assignment 1

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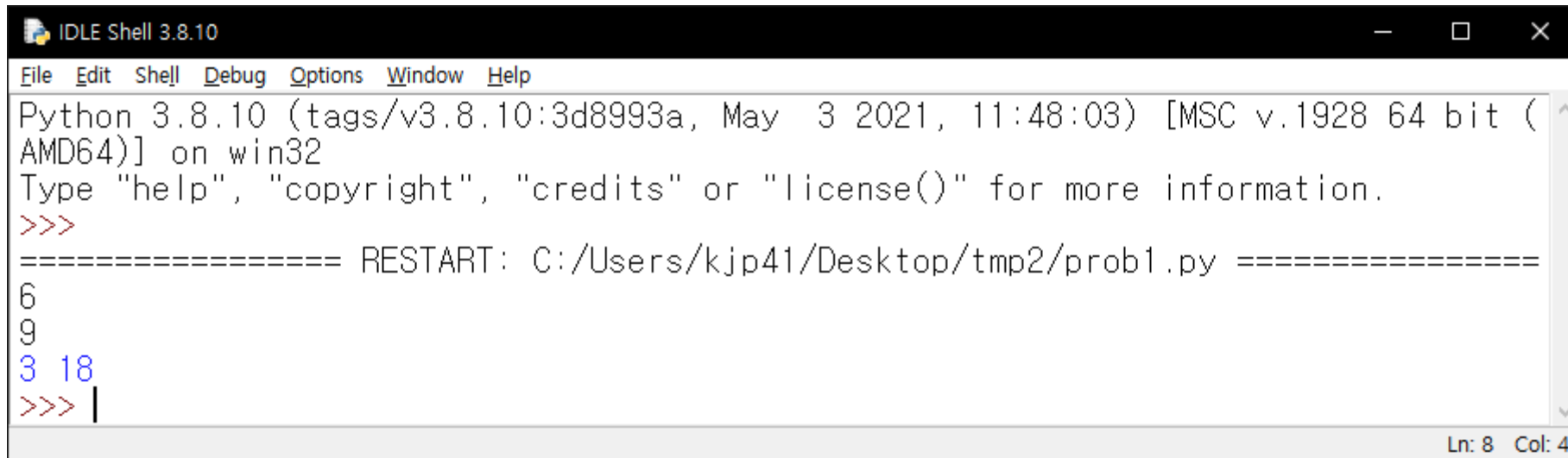
(TAs: Wookeun Jung, Heehoon Kim, Jinpyo Kim)

**Due: 11:59PM, Sunday, June 27, 2021**

SNU Graduate School of Data Science

# Problem 1

- Read two integers A and B. ( $1 \leq A \leq 100, 1 \leq B \leq 100$ )
- Print the GCD (greatest common divisor) and LCM (least common multiple) of A and B.

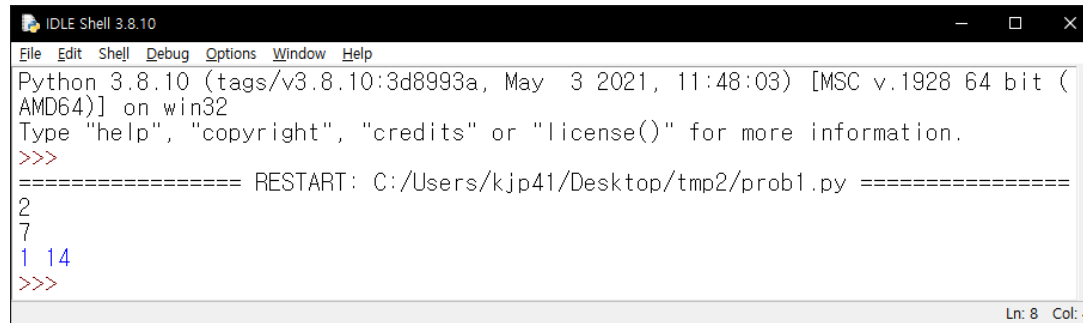


```
Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/kjp41/Desktop/tmp2/prob1.py =====
6
9
3 18
>>> |
```

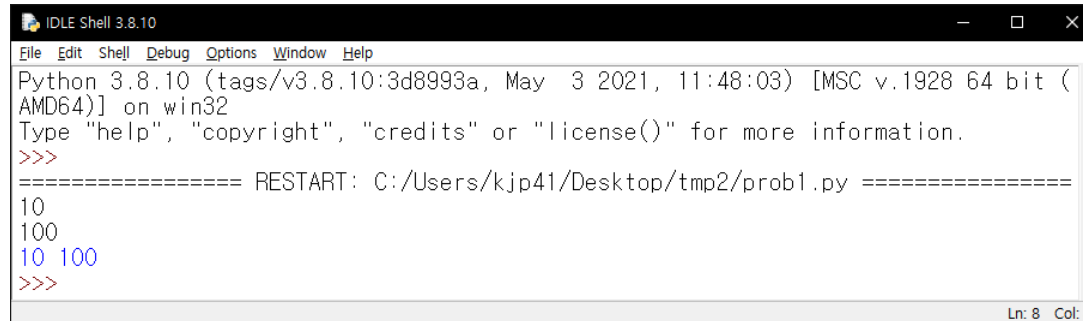
Ln: 8 Col: 4

# Problem 1

- Sample runs



```
Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/kjp41/Desktop/tmp2/prob1.py =====
2
7
1 14
>>>
```



```
Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/kjp41/Desktop/tmp2/prob1.py =====
10
100
10 100
>>>
```

# Problem 1

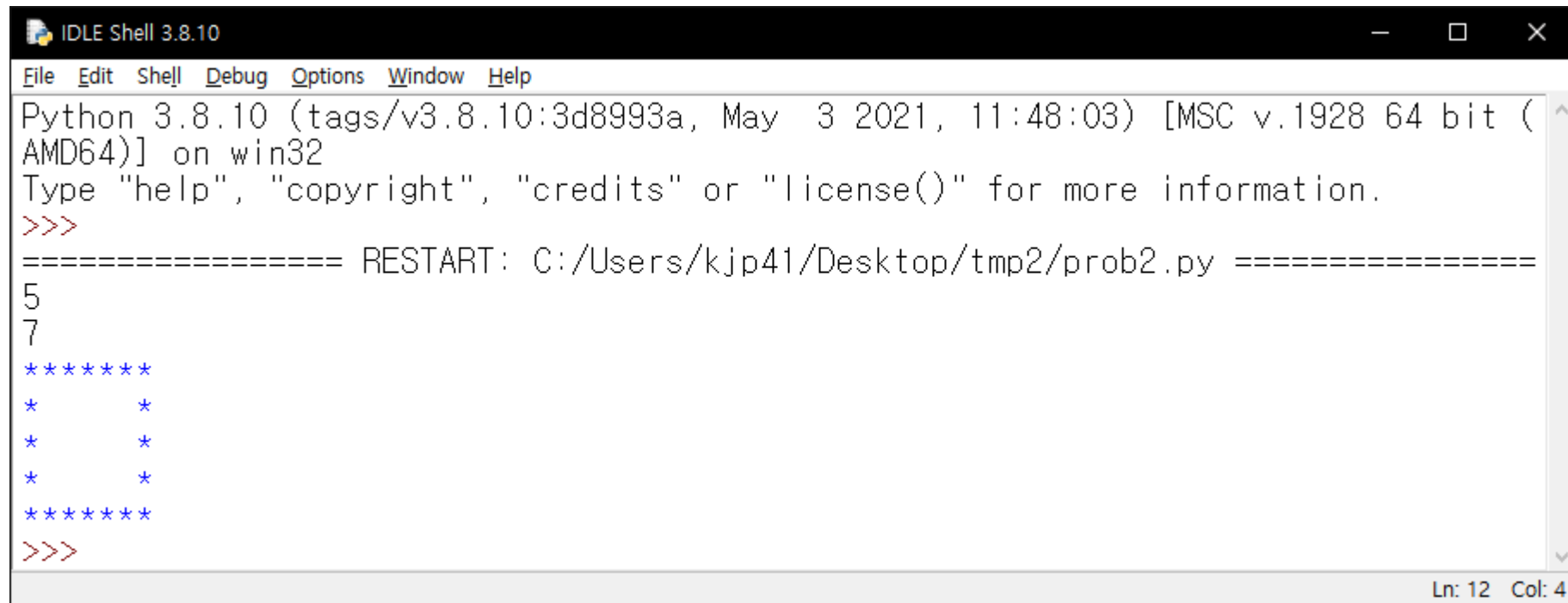
- Sample runs

```
fds299@login:~/HW1$ python3 prob1.py
input { 6
        14
output 2 42
```

```
fds299@login:~/HW1$ python3 prob1.py
input { 15
        10
output 5 30
```

# Problem 2

- Read two integer numbers R and C. ( $3 \leq R \leq 20, 3 \leq C \leq 20$ )
- Print an R x C **hollow** rectangle with '\*'.

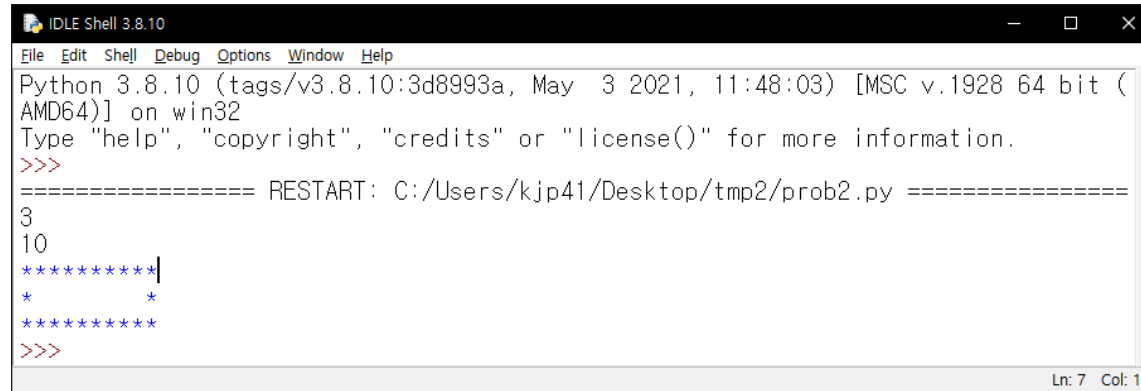


```
Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/kjp41/Desktop/tmp2/prob2.py =====
5
7
*****
*       *
*       *
*       *
*****
>>>
```

Ln: 12 Col: 4

# Problem 2

- Sample runs



```
Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/kjp41/Desktop/tmp2/prob2.py =====
3
10
*****|
*      *
*****
>>>
```



```
Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/kjp41/Desktop/tmp2/prob2.py =====
9
4
****
* *
* *
* *
* *
* *
* *
* *
****
>>>
```

# Problem 2

- Sample runs

```
fds299@login:~/HW1$ python3 prob2.py
input {
4
4
output {
****
*  *
*  *
****
```

```
fds299@login:~/HW1$ python3 prob2.py
input {
3
3
output {
***
* *
***
```

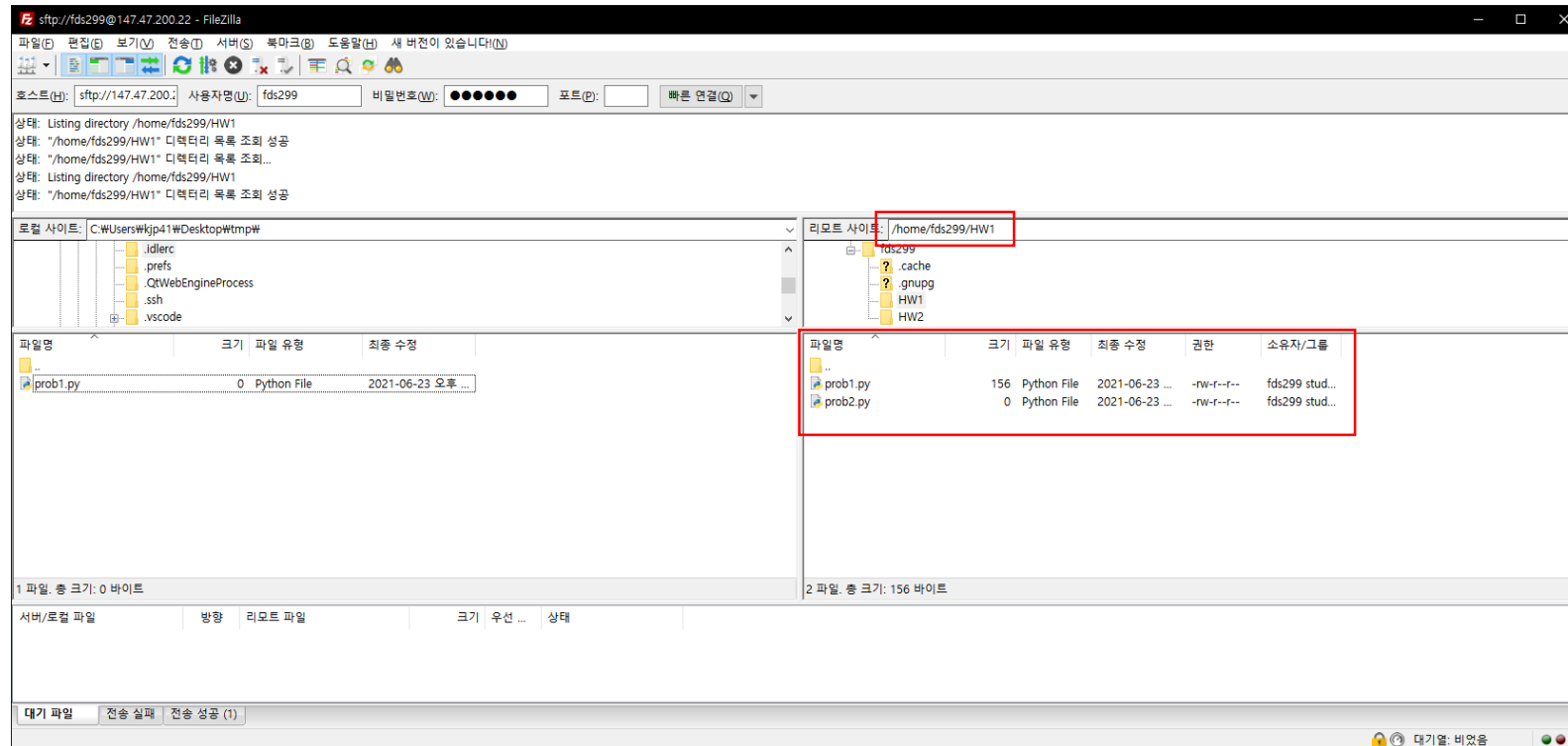
# Constraints

- Use Python 3.x (not Python 2)
- Libraries are not allowed.
  - Don't use `import` keyword.



# Homework submission

- Submission directory: /home/fdsXXX/HW1
  - ex. /home/fds299/HW1
- Two files: prob1.py, prob2.py



# Homework submission checklist

- Do not expect TAs will correct your mistake.
- Check the submission directory.
- Check the name of the submission files.
- Make sure the program prints only the required output.
- Make sure your debugging code is removed.

# Homework submission checklist

```
fds299@login:~/HW1$ pwd
/home/fds299/HW1
fds299@login:~/HW1$ ls -al
total 8
drwxr-xr-x  2 fds299 student 4096 Jun 23 20:12 .
drwx----- 6 fds299 student 4096 Jun 22 18:03 ..
-rw-r--r--  1 fds299 student    0 Jun 23 20:12 prob1.py
-rw-r--r--  1 fds299 student    0 Jun 23 20:12 prob2.py
fds299@login:~/HW1$ █
```

Method 1

# Homework submission checklist

```
fds299@login:~$ ls /home/fds299/HW1/prob1.py
/home/fds299/HW1/prob1.py
fds299@login:~$ ls /home/fds299/HW1/prob2.py
/home/fds299/HW1/prob2.py
fds299@login:~$ ls /home/fds299/HW1/prob3.py
ls: cannot access '/home/fds299/HW1/prob3.py': No such file or directory
fds299@login:~$ █
```

## Method 2

# Common mistakes 1

- Submission file is in a wrong directory.
  - [O] /home/fds299/HW1
  - [X] /home/fds299/HW\_1
  - [X] /home/fds299/hw1
  - [X] /home/fds299/hw
  - [X] /home/fds299/homework1
  - [X] /home/fds299/assignment
  - [X] /home/fds299/Hw1
  - [X] /home/fds299/hw1/hw1
  - [X] /home/fds299/1
  - [X] /home/fds299/A
  - [X] /home/fds299/HW\_A

# Common mistakes 2

- Submission file has a wrong name.
  - [O] /home/fds299/HW1/prob1.py
  - [X] /home/fds299/HW1/probA.py
  - [X] /home/fds299/HW1/Prob1.py
  - [X] /home/fds299/HW1/prob1.ipynb
  - [X] /home/fds299/HW1/prob1.txt
  - [X] /home/fds299/HW1/porb1.py
  - [X] /home/fds299/HW1/PROB1.py
  - [X] /home/fds299/HW1/p1.py
  - [X] /home/fds299/HW1/1.py
  - [X] /home/fds299/HW1/A.py
  - [X] /home/fds299/HW1/prob\_1.py

# Common mistakes 3

- Unexpected outputs (prints).
- Debugging code has not been removed.

```
fds299@login:~/HW1$ python3 prob1.py
3
15
3 15
```

Correct

```
fds299@login:~/HW1$ python3 prob1.py
3
15
?? A=3, B=15
3 15
```

Wrong