INTRODUCTION TO COMPUTING AND PROGRAMMING IN PYTHON

2017. 06. 15

INTRODUCTION

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JES INSTALLATION GUIDE

JES? JRE?

- JES: Jython Environment for Student
  - Jython is a Java implementation of Python
  - Jython needs Java (JRE) to run
- JRE: Java Runtime Environment

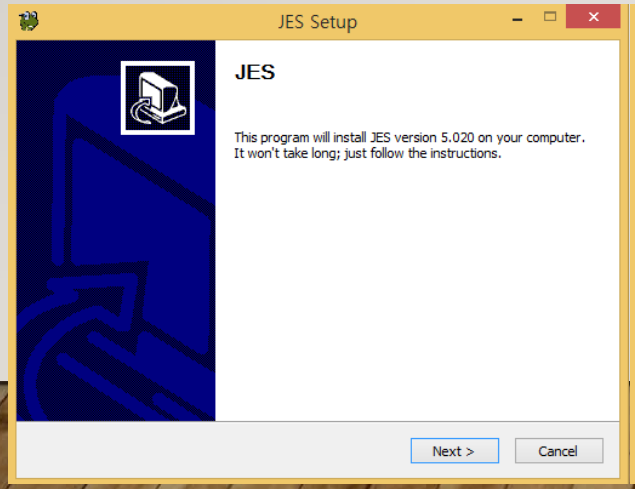
DOWNLOAD JES

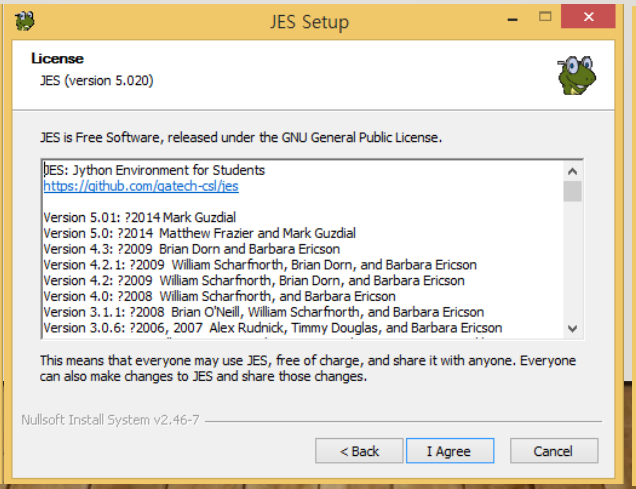
- Available at

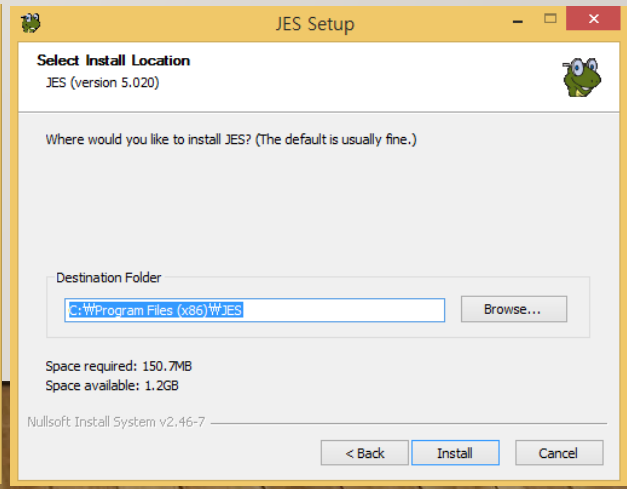
https://github.com/gatech-csl/jes/releases/tag/5.020

INSTALLATION - WINDOWS

1. Run jes-5.020-Windows.exe with administrator rights
2. Click ‘Next’ until installation is complete
3. By default, JES is installed in C:\Program Files (x86)\JES







INTRODUCTION TO PYTHON

Pros

- Easy to learn
- Quick development
- Support multiple system and platforms
- etc…

Cons

- Slow

BASIC OF PYTHON

```
>>> 1 + 2
3
>>> 3 / 2
1
>>> 3 * 9
27
>>>print “Python”
Python
```

```
>>> a = 1
>>> b = 2
>>> a + b
3

>>> a = "Python"
>>> print a
Python
```

BASIC OF PYTHON

```
>>> a = 2 + 3j
>>> b = 3
>>> a * b
(6+9j)
>>> 7%3
1
```

```
>>> a = 0177
127
>>> b = 0xABC
2748
>>> def sum(a,b):
[indent]return a+b
```

BASIC OF PYTHON

- If money is more than 10,000, print enough.
- Otherwise, print not enough
- **if** money> 10000 :

... print(“enough")

... **else**:

... print(“not enough")

EXERCISE

1. Print “Hello, World!”

    Using variables and merging them

        e.g.) a = “Hello”

            b = “World!”

Output:

EXERCISE

2. Set the following variables to the corresponding values and print them

1. myint to the value 7
2. myfloat to the value 3.141592
3. mybool to the value True

Output:

```
>>> print myint
7
>>> print myfloat
3.141592
>>> print mybool
True
```

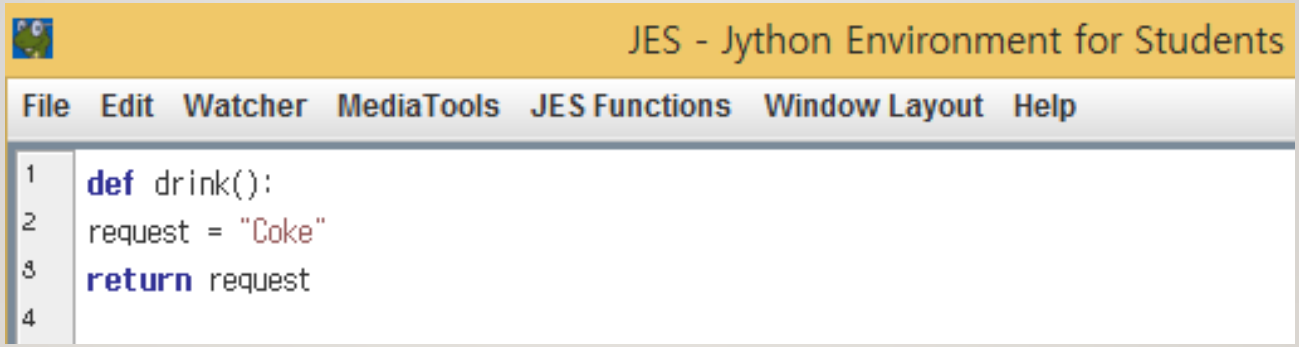
EXERCISE

3. Change the value of myint from 7 to 15 and print it (from Exercise 2).

Output:

EXERCISE

4. The code's grammar is incorrect. Edit it!



Output:

```
======= Loading Progam =======
>>> print drink()
Coke
```

EXERCISE

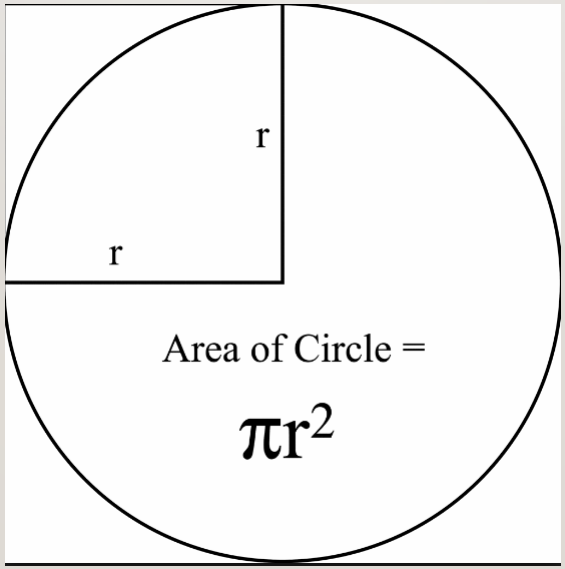
5. Single line comments: Write a comment on line 1 as you want (in Exercise 4).

6. Multi-line comments: Write a multi-line comment on line 1 as you want (in Exercise 4).

EXERCISE

7. Write the code that accepts the radius of a circle and compute the area.

(π = 3.141592)



EXERCISE

8. Implementing a scoring program

- input: score, output: grade

Score	Grade
>90	A
>80	B
>70	C
<=70	F

EXERCISE: CHALLENGE

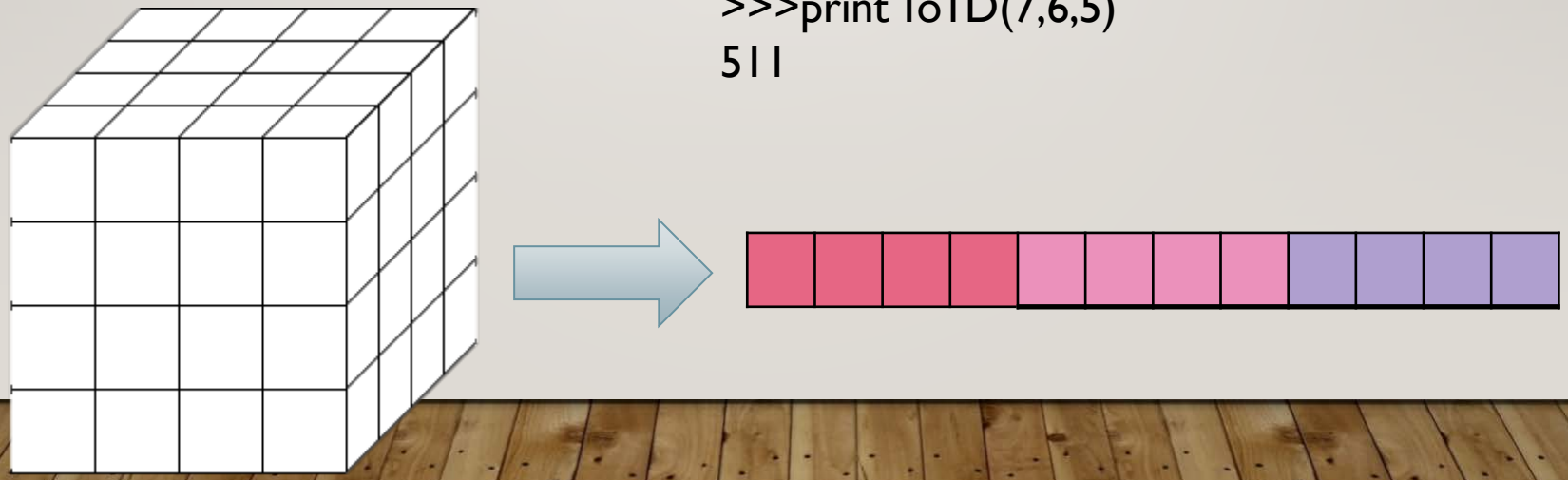
9. Converting 3D index to 1D index.

3D : [0:8, 0:9, 0:10]

1D : [0:989]

```
def To1D(x, y, z):
#blank

>>>print To1D(2,2,2)
200
>>>print To1D(7,6,5)
511
```



EXERCISE: CHALLENGE

10. The second largest number (only use if statement).

- Input: three numbers.
- Output: the second largest number

e.g.)

20 20 20 => 20

20 30 40 => 30

20 30 10 => 20