PYTHON-PALETTE

@yeseuly.park – 24.03.08 (1st)

To Do List

- Installation
  - *Python*
  - *VSCode*
  - *Anaconda*
  - *GitHub*
- Development
  - *variable*
  - *function*
  - *If*
  - *for / while*
  - *assignment*

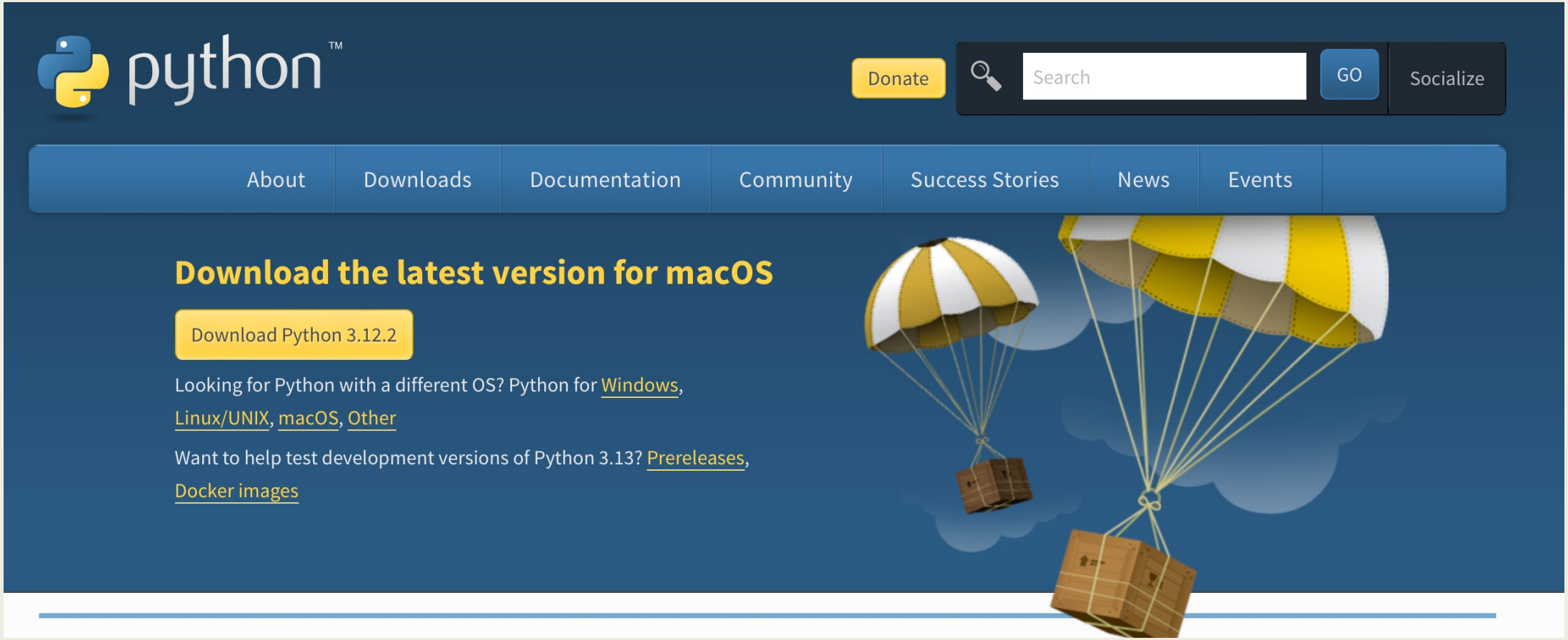
Installation

- Environmental Set-up

- Python
- VSCode
- Anaconda
- GitHub

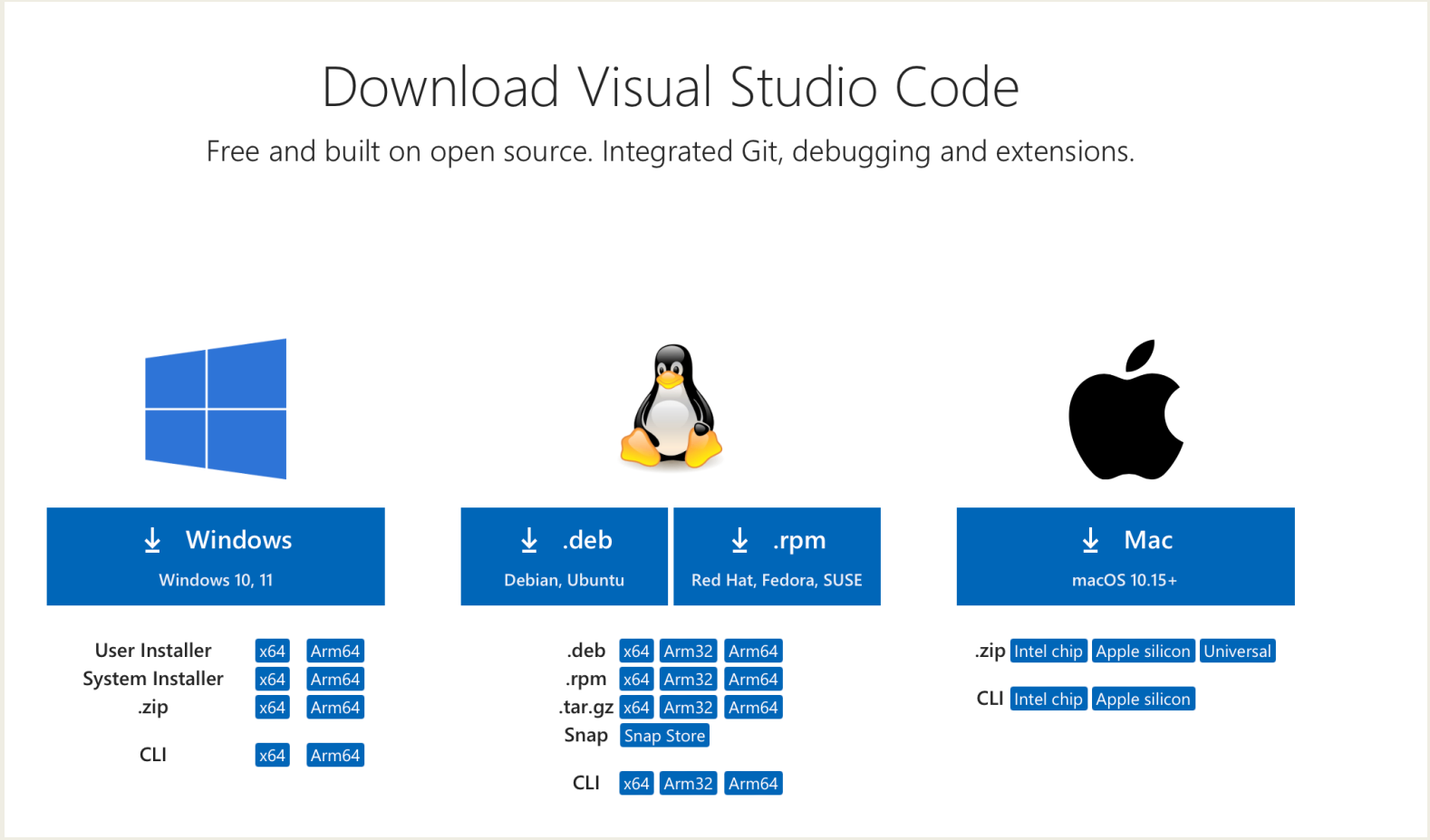
Python – latest version 3.12.2

https://www.python.org/downloads/



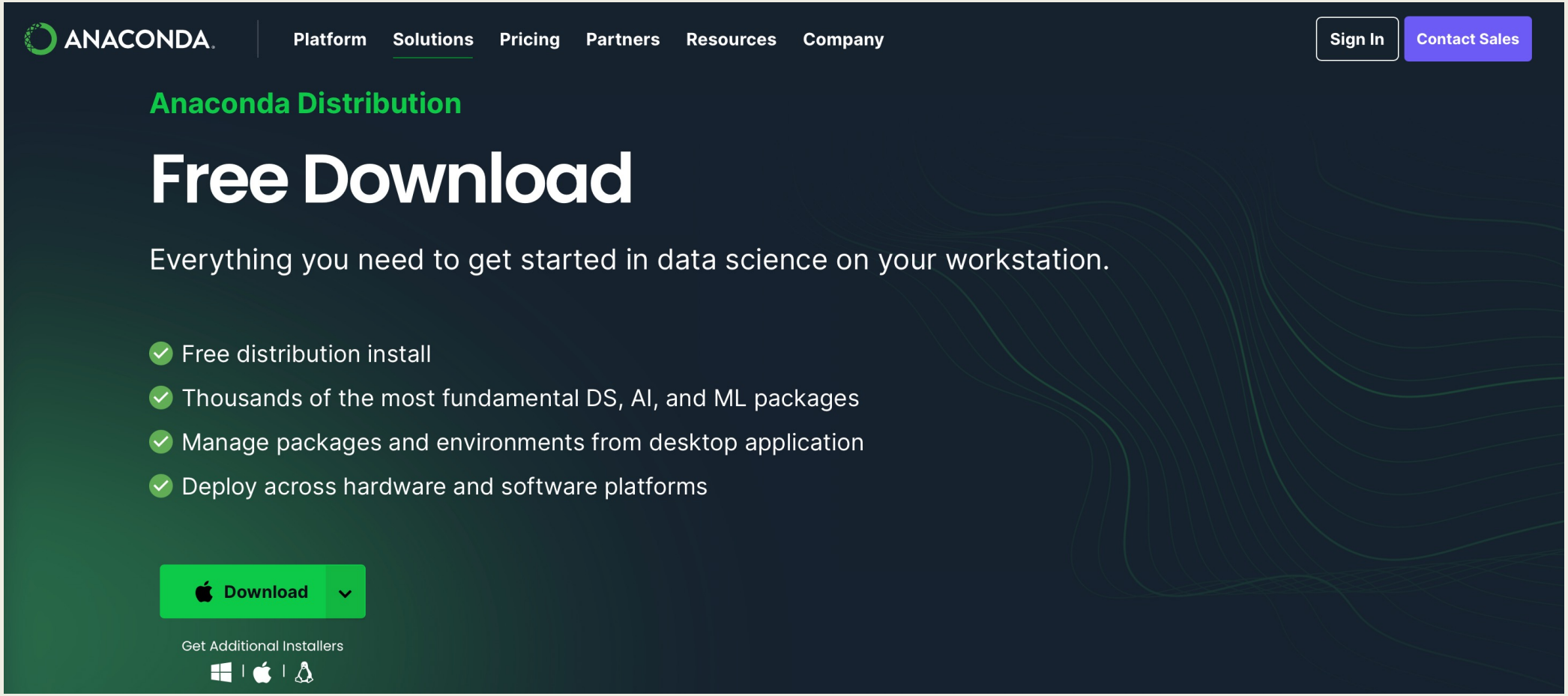
VScode – check your OS (dependancies)

https://code.visualstudio.com/download

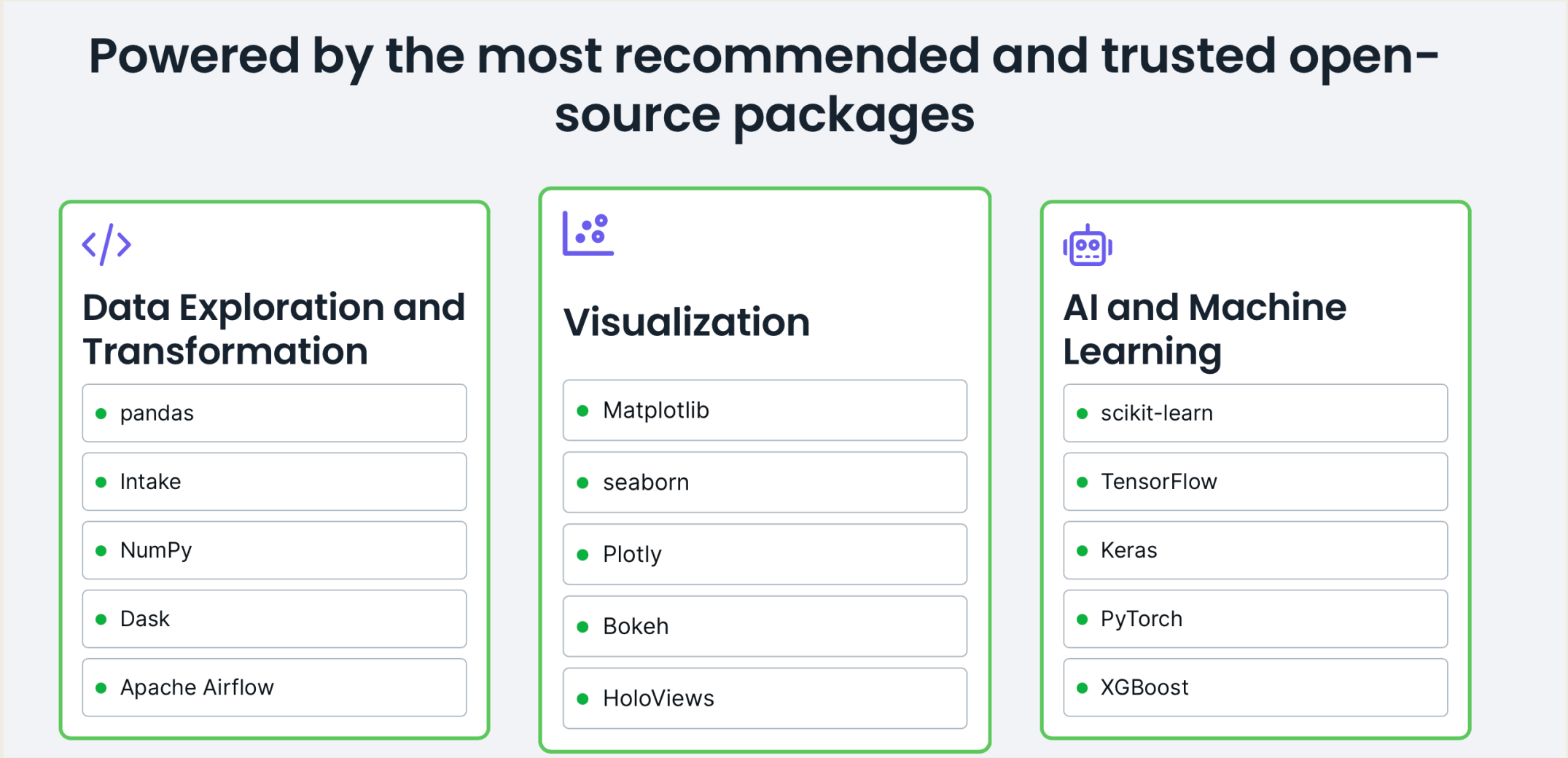


Anaconda – check your OS (dependancies)

https://www.anaconda.com/download

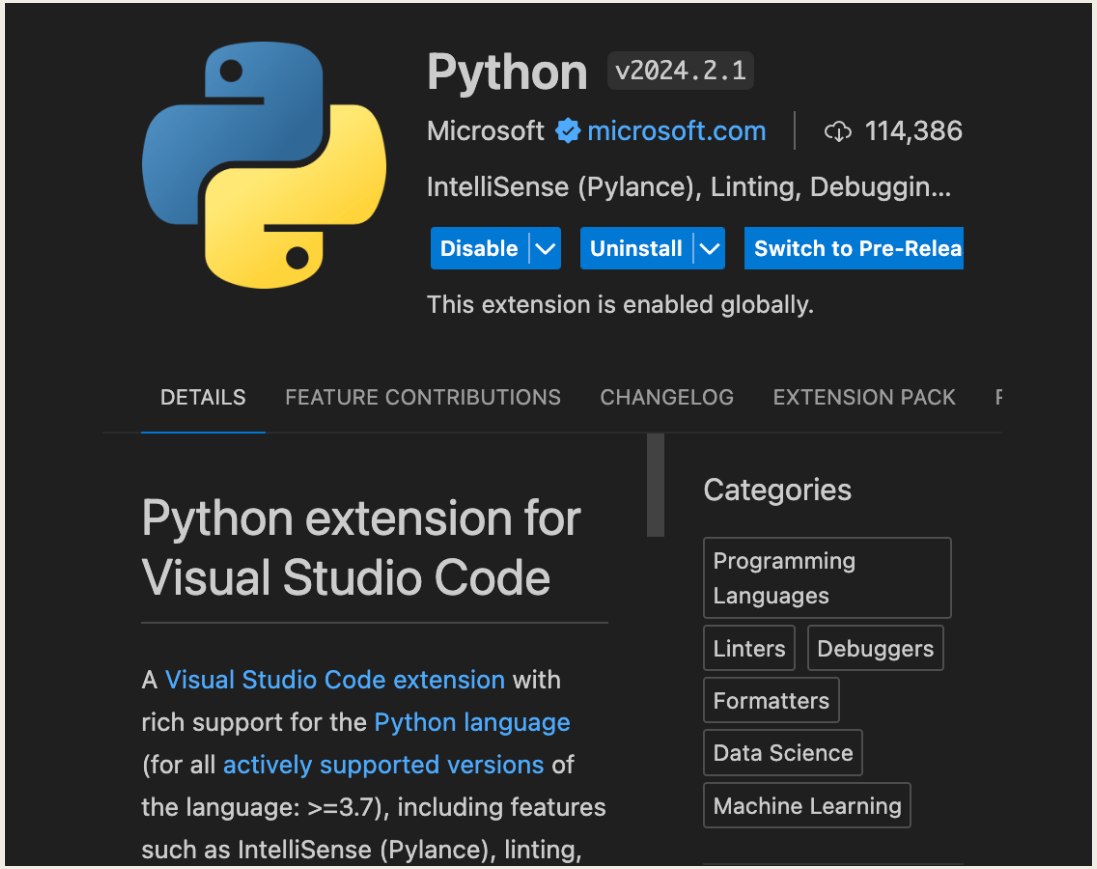


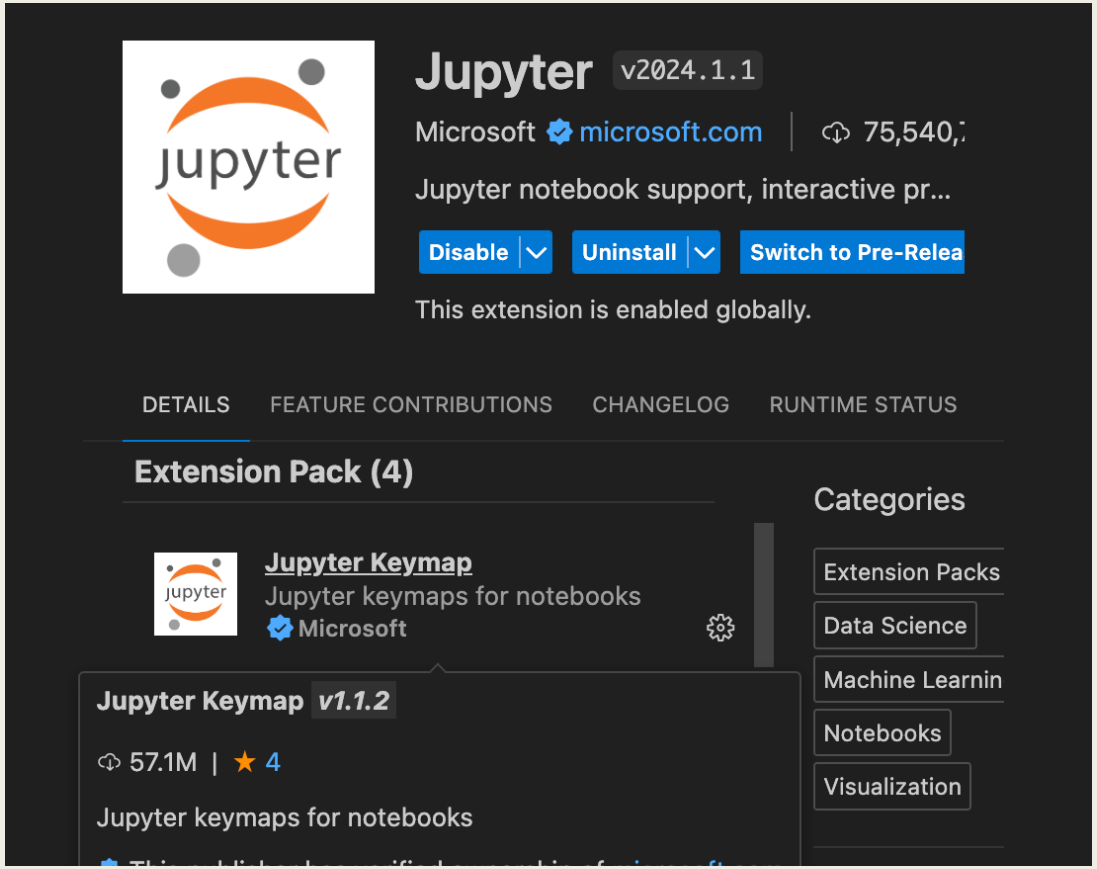
Anaconda – check your OS (dependancies)



VScode – workspace set-up

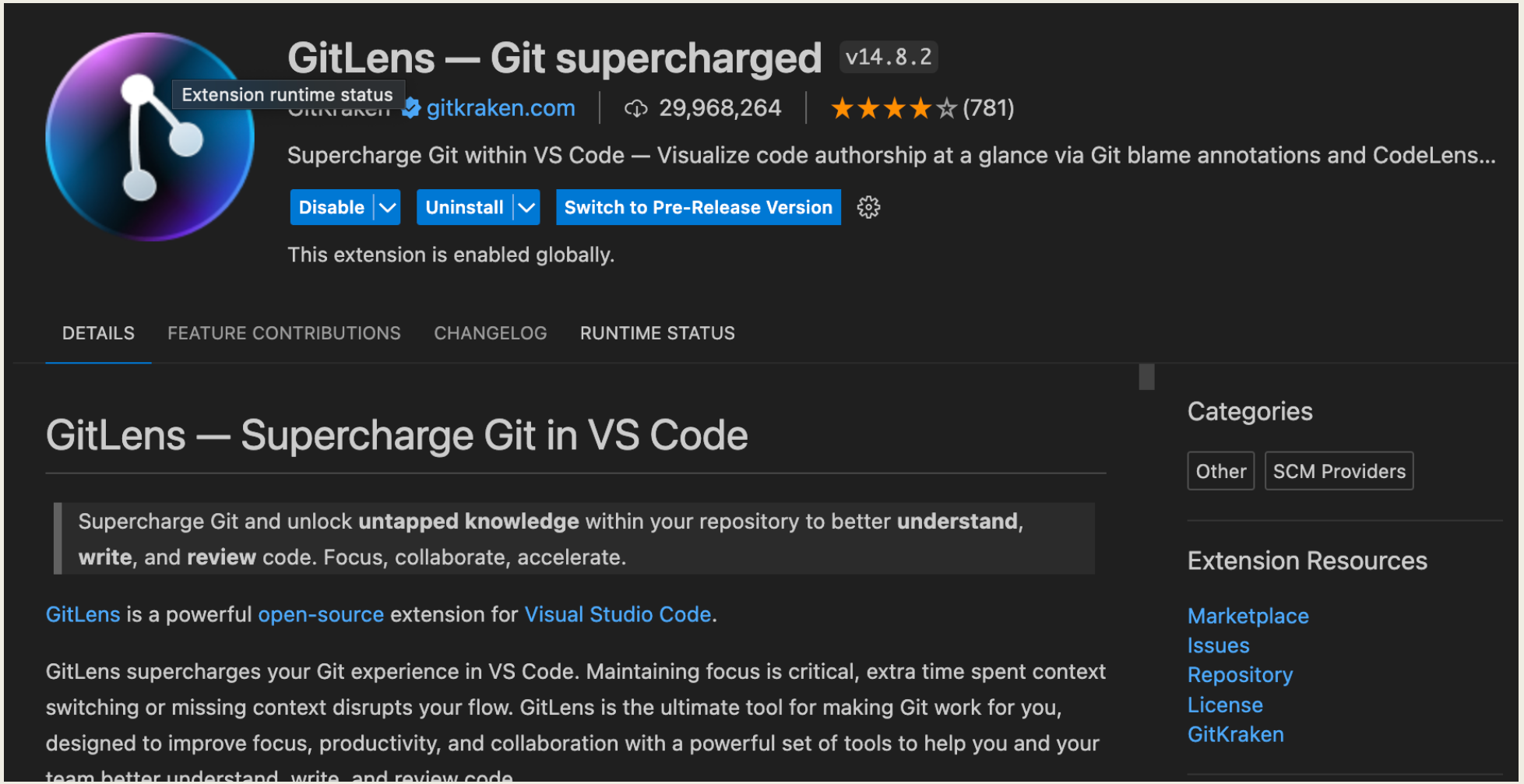
1. Extension Installation





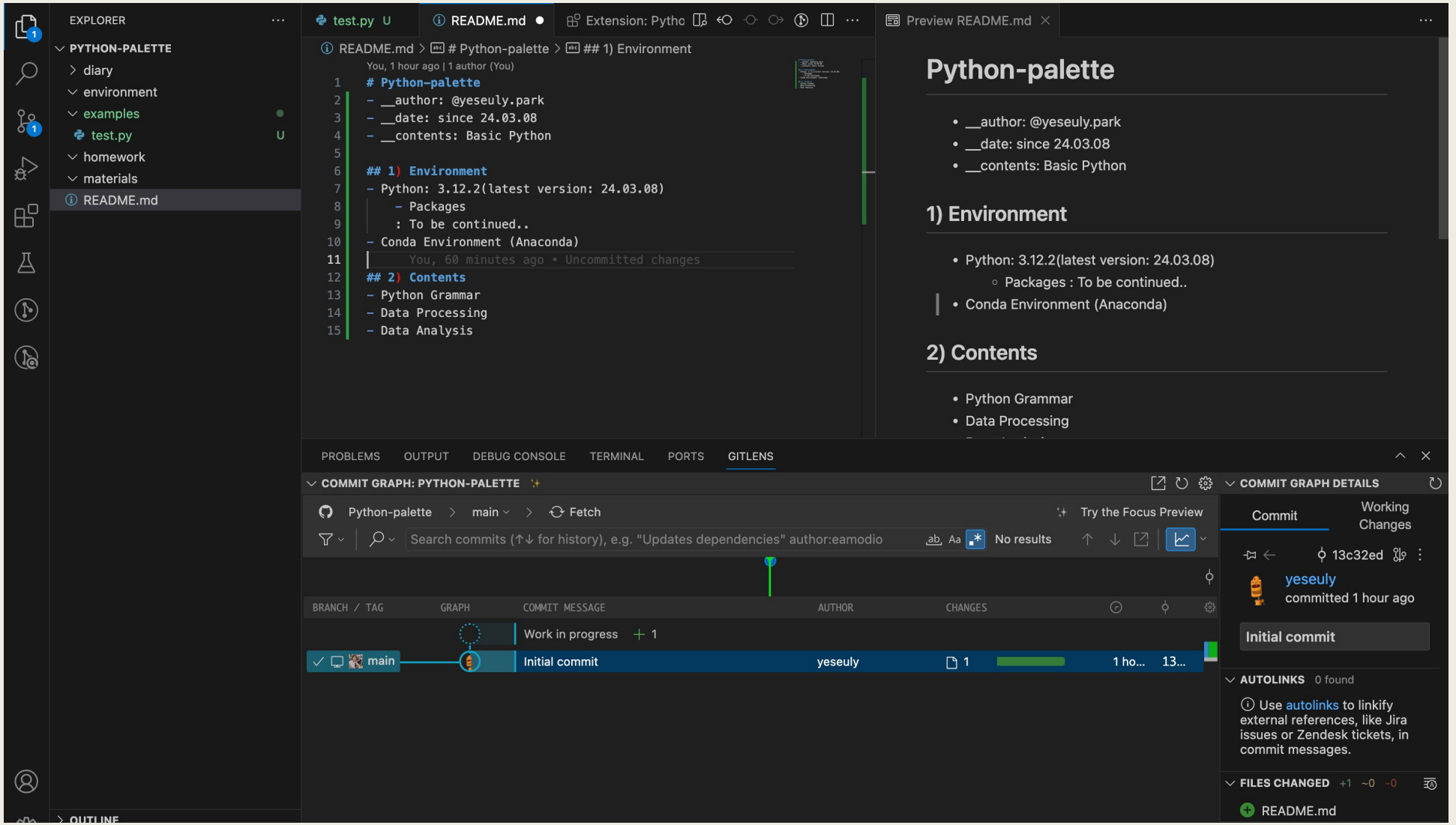
VScode – workspace set-up

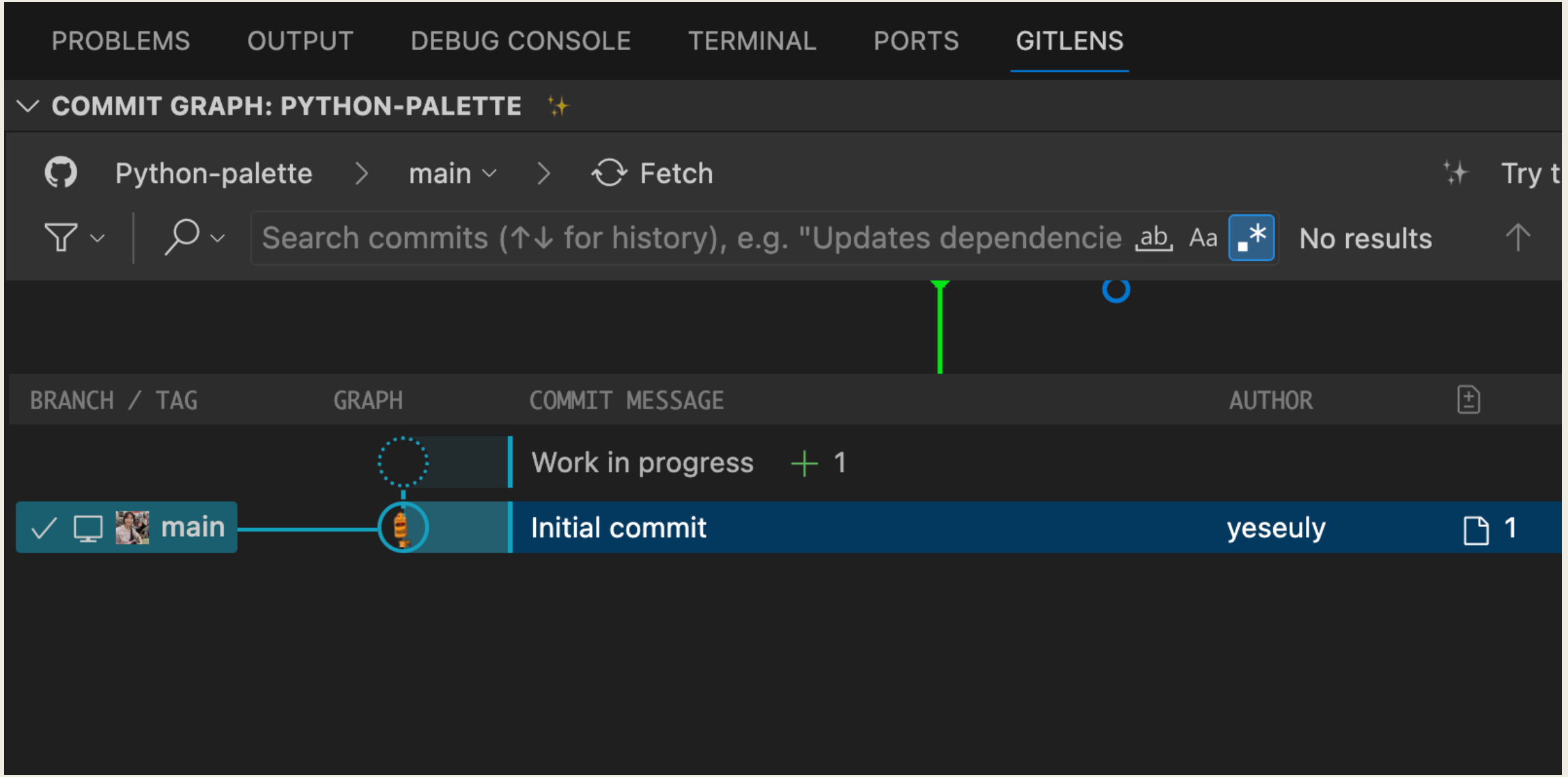
1. Extension Installation



VScode – workspace set-up

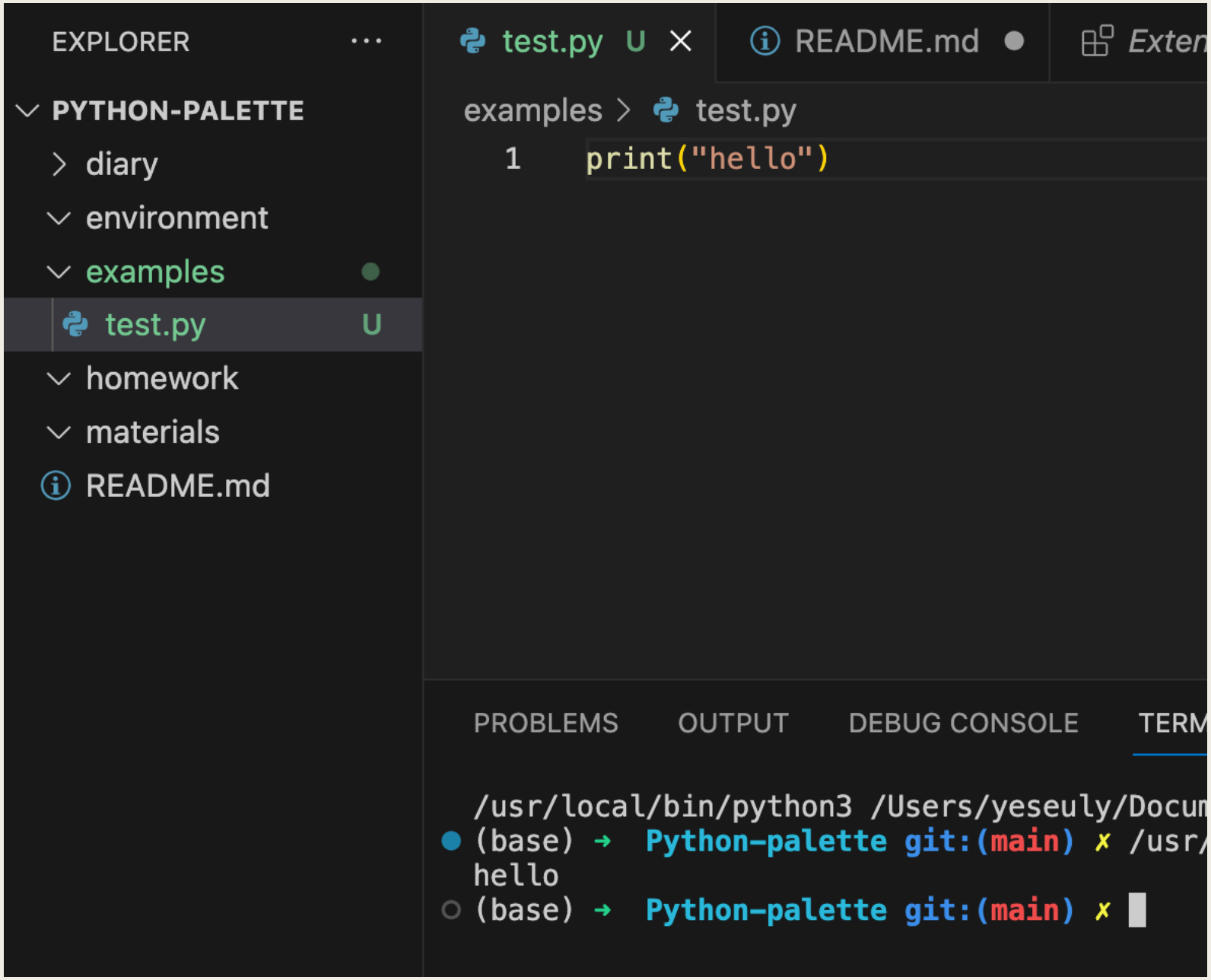
2. Gitlens




PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
GITLENS
COMMIT GRAPH: PYTHON-PALETTE
Python-palette
main
Fetch
Try t
Search commits (↑↓ for history), e.g. "Updates dependencie
ab
Aa
No results
BRANCH / TAG
GRAPH
COMMIT MESSAGE
AUTHOR
Work in progress
1
main
Initial commit
yeseuly
1

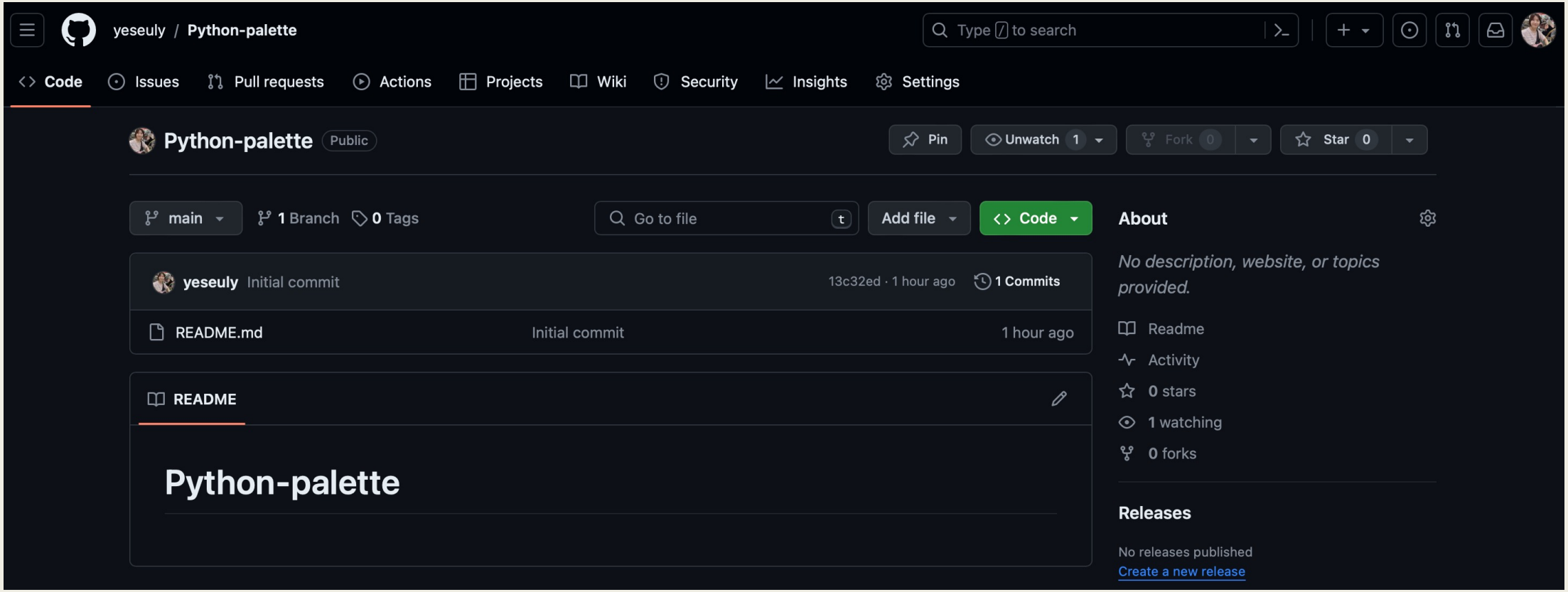
VScode

3. Conda



GitHub – make your own ID

https://github.com/yeseuly/Python-palette



Development

- Basic Python

- variable
- function
- If
- for / while
- assignment

Variables – definition

Grammar

→ “Variable Name = Variable Value”

```
a = 3
print(a)
```

```
3
```

```
a = 3
b = 5
c = a + b
print(c)
```

```
8
```

Variables – int/float

```
a = 3
b = 2.5
```

```
print(type(a))
```

```
<class 'int'>
```

```
print(type(b))
```

```
<class 'float'>
```

```
a = 7
b = 2

print(a + b)
```

```
9
```

```
print(a - b)
```

```
5
```

```
print(a % b)
```

```
1
```

Variables – string

```
a = '안녕 파이썬'
print(a)
```

```
안녕 파이썬
```

```
print(type(a))
```

```
<class 'str'>
```

```
a = 1
b = '1'
c = 1.0
d = "1.0"

print(type(a))
print(type(b))
print(type(c))
print(type(d))
```

```
<class 'int'>
<class 'str'>
<class 'float'>
<class 'str'>
```

Variables – string

```
a = '안녕'
b = '파이썬'
print(a + b)
```

```
안녕파이썬
```

```
a = '안녕'
b = '파이썬'
c = ' '
print(a + c + b)
```

```
안녕 파이썬
```

```
a = '안녕 파이썬'
b = 1
print(a + b)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-5-16efbab39763> in <module>
      1 a = '안녕 파이썬'
      2 b = 1
----> 3 print(a + b)

TypeError: can only concatenate str (not "int") to str
```

Variables – string

```
a = 3
print(type(str(a)))
```

```
<class 'str'>
```

```
a = 3
b = 5
c = 8
print(a + ' 더하기 ' + b + '는 ' + c + '이에요~')
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-14-caeac29d5648> in <module>
      2 b = 5
      3 c = 8
----> 4 print(a + ' 더하기 ' + b + '는 ' + c + '이에요~')

TypeError: unsupported operand type(s) for +: 'int' and 'str'
```

Variables – string

```
var = '안녕하세요. 반갑습니다.'
```

```
print(var[0])
print(var[2])
print(var[8])
```

```
안
하
갑
```

- 안 : 0
- 녕 : 1
- 하 : 2
- 세 : 3
- 요 : 4
- . : 5
- 공백 : 6
- 반 : 7
- 갑 : 8
- 습 : 9
- 니 : 10
- 다 : 11
- . : 12

Function – declaration

```
>>> def 함수이름(인자1, 인자2, ...):
...     # 함수의 본문
...     # return 반환값
>>> 변수 = 함수이름(인자1, 인자2, ...) #함수 호출
```

```
>>> def add(a, b):
...     result = a + b
...     return result
>>> print(add(3, 4)) # 출력 : 7
```

```
>>> def print_hello():
...     print("Hello, World!")
>>> print_hello() # 출력 : Hello, World!
```

IF – declaration

```
1 | if 조건식 1:
2 |     코드 블록 1
3 | elif 조건식 2:
4 |     코드 블록 2
5 | ...
6 | elif 조건식 n:
7 |     코드 블록 n
8 | else:
9 |     코드 블록 n+1
```

```
1 | x = 5
2 | if x > 0:
3 |     print("양수입니다")
```

```
1 | x = 0
2 | if x > 0:
3 |     print("양수입니다")
4 | elif x == 0:
5 |     print("0입니다")
6 | else:
7 |     print("음수입니다")
```

```
1 | x = 5
2 | if x > 0:
3 |     print("양수입니다")
4 | else:
5 |     print("음수입니다")
```

IF – declaration

```
1  fruits = ["apple", "banana", "cherry"]
2
3  if "apple" in fruits:
4      print("apple is in the fruits list")
5  else:
6      print("apple is not in the fruits list")
```

IF – declaration

```
1  numbers = [1, 2, 3, 4, 5]
2
3  if 6 in numbers:
4      print("6 is in the numbers list")
5  elif 7 in numbers:
6      print("7 is in the numbers list")
7  else:
8      print("6 and 7 are not in the numbers list")
```

FOR – declaration

```
>>> for 변수 in 범위:
>>>     수행할 문장1
>>>     수행할 문장2
```

```
#range를 이용한 반복문
>>> for i in range(1, 11):
>>>     print(i)

#리스트를 이용한 반복문
>>> fruits = ["사과", "바나나", "포도"]
>>> for fruit in fruits:
>>>     print(fruit)

#문자열을 이용한 반복문
>>> text = "파이썬"
>>> for character in text:
>>>     print(character)
```

FOR – declaration

```
1 | >>> for 변수1 in 반복 가능한 객체1:
2 | >>>     for 변수2 in 반복 가능한 객체2:
3 | >>>         실행할 코드
```

```
1 | >>> for i in range(2, 10):
2 | >>>     for j in range(1, 10):
3 | >>>         print(f"{i} * {j} = {i * j}")
4 | >>>     print()
```

WHILE – declaration

```
>>> while 조건1:
>>>     while 조건2:
>>>         실행할 코드
>>>     조건1에 관련된 변수 변경
```

```
>>> i = 2

>>> while i < 10:
>>>     j = 1
>>>     while j < 10:
>>>         print(f"{i} * {j} = {i * j}")
>>>         j += 1
>>>     print()
>>>     i += 1
```

```
>>> n = 1

>>> while True:
>>>     if n > 10:
>>>         break
>>>     print(n)
>>>     n += 1
```

Assignment 1