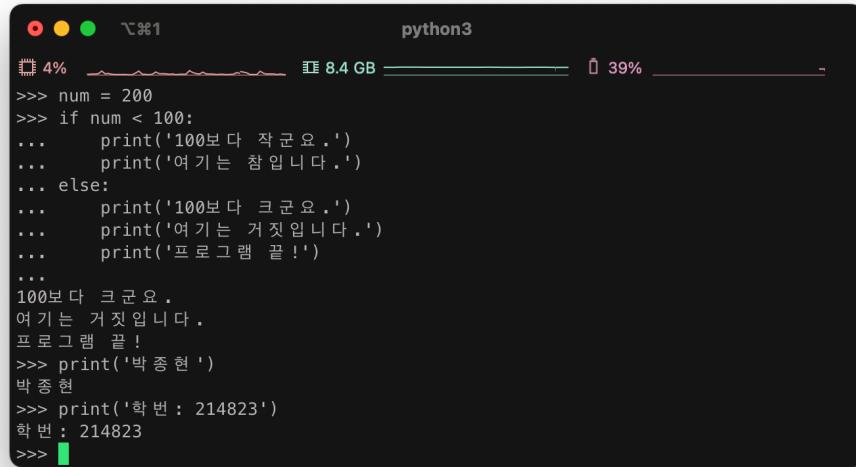


Homework 02

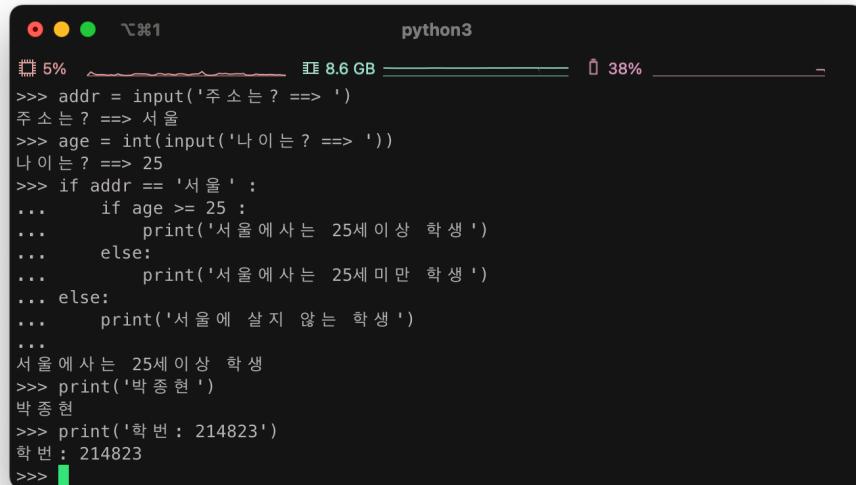
이름: 박종현
학번: 214823

[1] 5-1. 17-18쪽

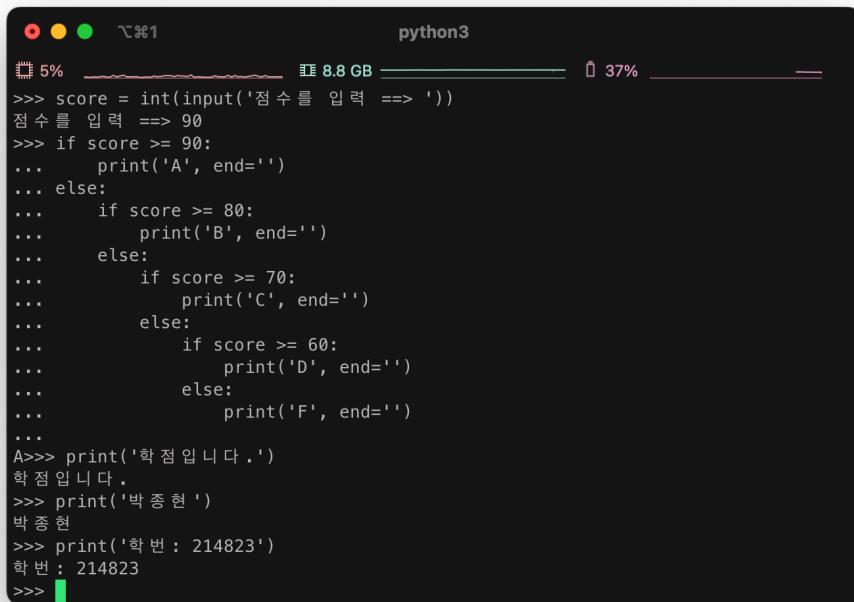


```
python3
4% 8.4 GB 39%
>>> num = 200
>>> if num < 100:
...     print('100보다 작군요.')
...     print('여기는 참입니다.')
... else:
...     print('100보다 크군요.')
...     print('여기는 거짓입니다.')
...     print('프로그램 끝!')
...
100보다 크군요.
여기는 거짓입니다.
프로그램 끝!
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>> █
```

[2] 5-1. 21-22쪽

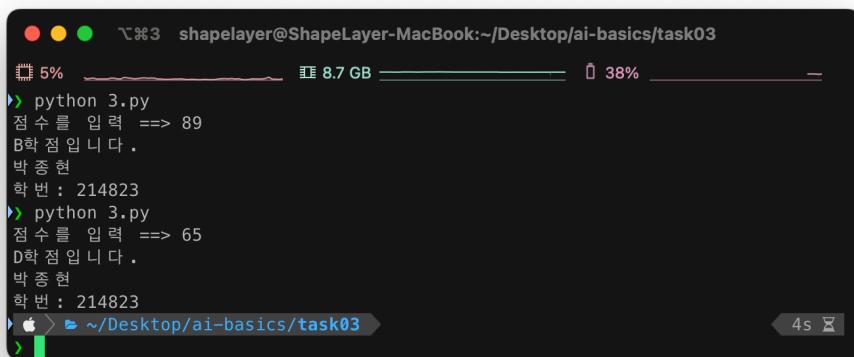


```
python3
5% 8.6 GB 38%
>>> addr = input('주소는? ==> ')
주소는? ==> 서울
>>> age = int(input('나이는? ==> '))
나이는? ==> 25
>>> if addr == '서울':
...     if age >= 25:
...         print('서울에 사는 25세 이상 학생')
...     else:
...         print('서울에 사는 25세 미만 학생')
... else:
...     print('서울에 살지 않는 학생')
...
서울에 사는 25세 이상 학생
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>> █
```

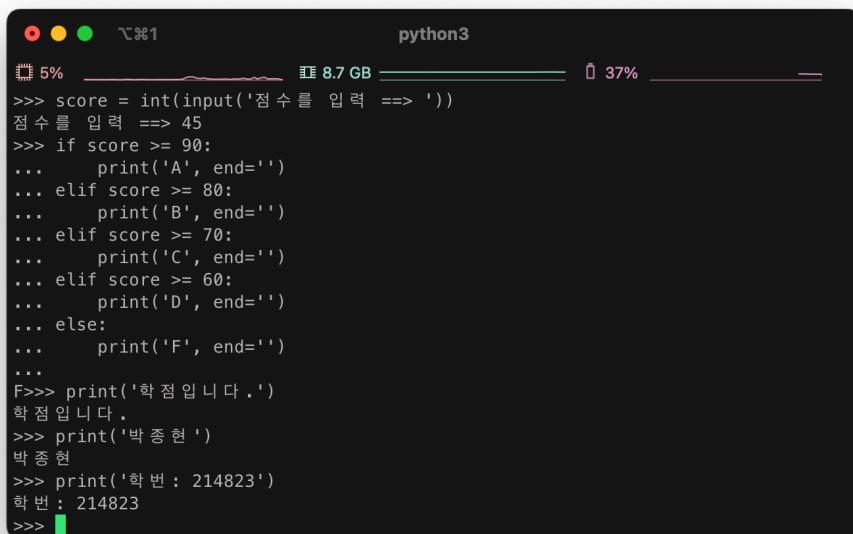


```
python3
>>> score = int(input('점수를 입력 ==> '))
점수를 입력 ==> 90
>>> if score >= 90:
...     print('A', end='')
... else:
...     if score >= 80:
...         print('B', end='')
...     else:
...         if score >= 70:
...             print('C', end='')
...         else:
...             if score >= 60:
...                 print('D', end='')
...             else:
...                 print('F', end='')

A>>> print('학점입니다.')
학점입니다.
>>> print('박종현')
박종현
>>> print('학번 : 214823')
학번 : 214823
>>>
```

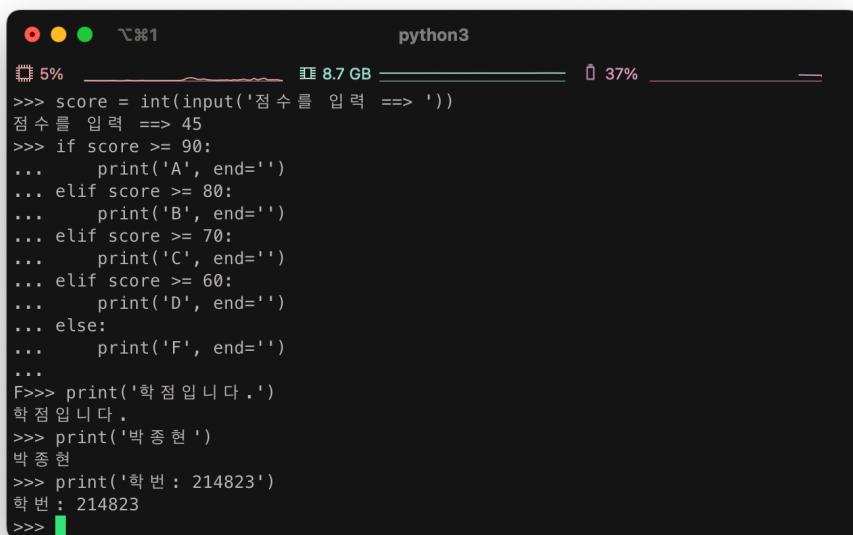


```
task03
>>> python 3.py
점수를 입력 ==> 89
B학점입니다.
박종현
학번 : 214823
>>> python 3.py
점수를 입력 ==> 65
D학점입니다.
박종현
학번 : 214823
>>>
```



```
python3
>>> score = int(input('점수를 입력 ==> '))
점수를 입력 ==> 45
>>> if score >= 90:
...     print('A', end='')
... elif score >= 80:
...     print('B', end='')
... elif score >= 70:
...     print('C', end='')
... elif score >= 60:
...     print('D', end='')
... else:
...     print('F', end='')

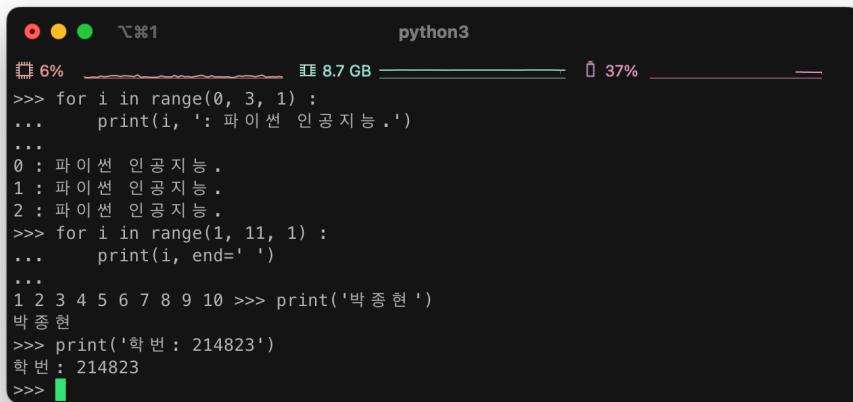
...
F>>> print('학점입니다.')
학점입니다.
>>> print('학번')
학번
>>> print('학번 : 214823')
학번 : 214823
>>> 
```



```
python3
>>> score = int(input('점수를 입력 ==> '))
점수를 입력 ==> 45
>>> if score >= 90:
...     print('A', end='')
... elif score >= 80:
...     print('B', end='')
... elif score >= 70:
...     print('C', end='')
... elif score >= 60:
...     print('D', end='')
... else:
...     print('F', end='')

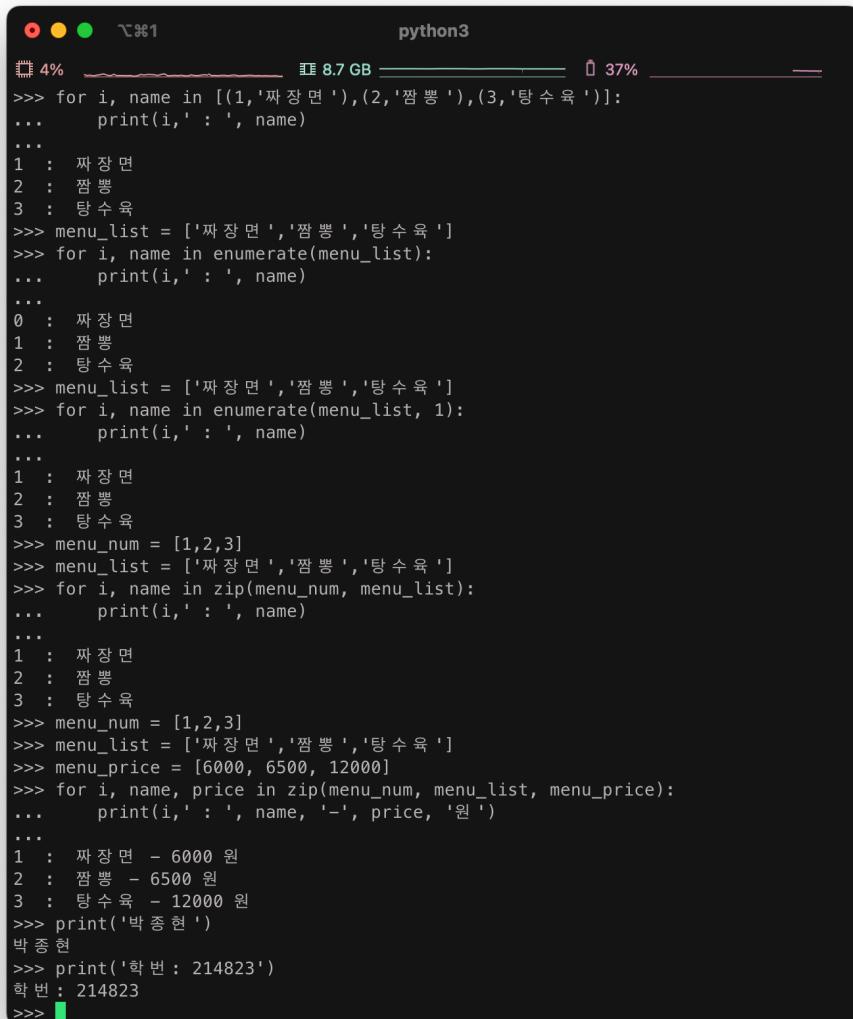
...
F>>> print('학점입니다.')
학점입니다.
>>> print('학번')
학번
>>> print('학번 : 214823')
학번 : 214823
>>> 
```

[5] 5-2. 9쪽



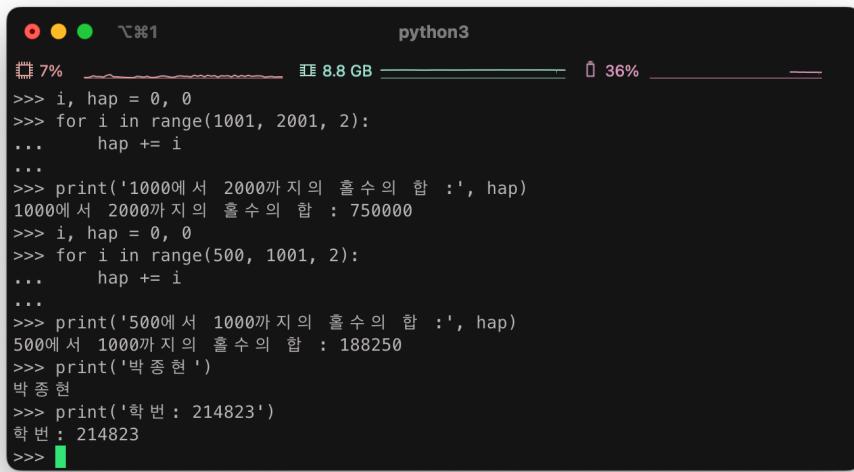
```
python3
>>> for i in range(0, 3, 1):
...     print(i, ': 파이썬 인공지능.')
...
0 : 파이썬 인공지능.
1 : 파이썬 인공지능.
2 : 파이썬 인공지능.
>>> for i in range(1, 11, 1):
...     print(i, end=' ')
...
1 2 3 4 5 6 7 8 9 10 >>> print('박종현')
박종현
>>> print('학번: 214823')
학번 : 214823
>>> 
```

[6] 5-2. 11-13쪽



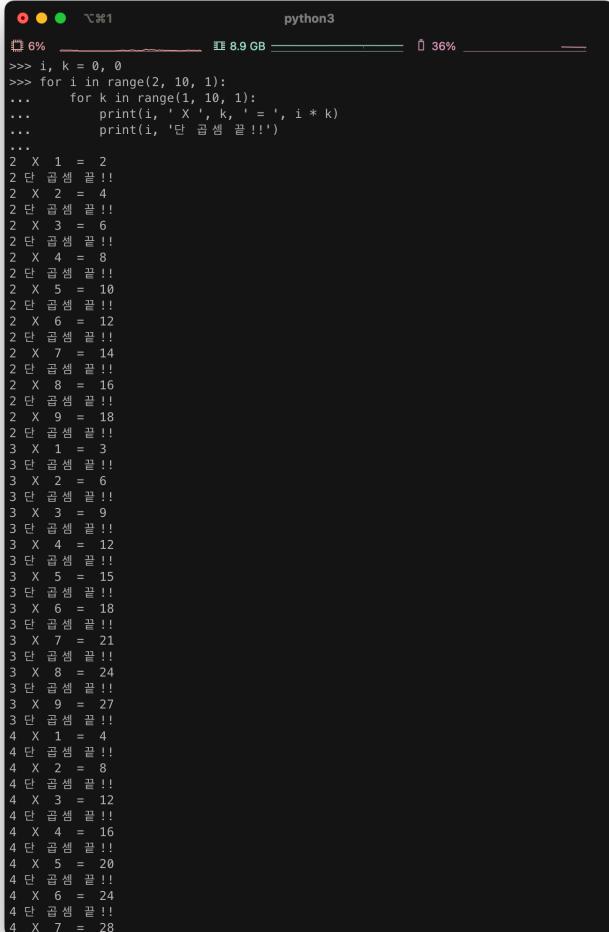
```
python3
>>> for i, name in [(1,'짜장면'),(2,'짬뽕'),(3,'탕수육')]:
...     print(i, ': ', name)
...
1 : 짜장면
2 : 짬뽕
3 : 탕수육
>>> menu_list = ['짜장면','짬뽕','탕수육']
>>> for i, name in enumerate(menu_list):
...     print(i, ': ', name)
...
0 : 짜장면
1 : 짬뽕
2 : 탕수육
>>> menu_list = ['짜장면','짬뽕','탕수육']
>>> for i, name in enumerate(menu_list, 1):
...     print(i, ': ', name)
...
1 : 짜장면
2 : 짬뽕
3 : 탕수육
>>> menu_num = [1,2,3]
>>> menu_list = ['짜장면','짬뽕','탕수육']
>>> for i, name in zip(menu_num, menu_list):
...     print(i, ': ', name)
...
1 : 짜장면
2 : 짬뽕
3 : 탕수육
>>> menu_num = [1,2,3]
>>> menu_list = ['짜장면','짬뽕','탕수육']
>>> menu_price = [6000, 6500, 12000]
>>> for i, name, price in zip(menu_num, menu_list, menu_price):
...     print(i, ': ', name, '-', price, '원')
...
1 : 짜장면 - 6000 원
2 : 짬뽕 - 6500 원
3 : 탕수육 - 12000 원
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번 : 214823
>>> 
```

[7] 5-2. 17쪽

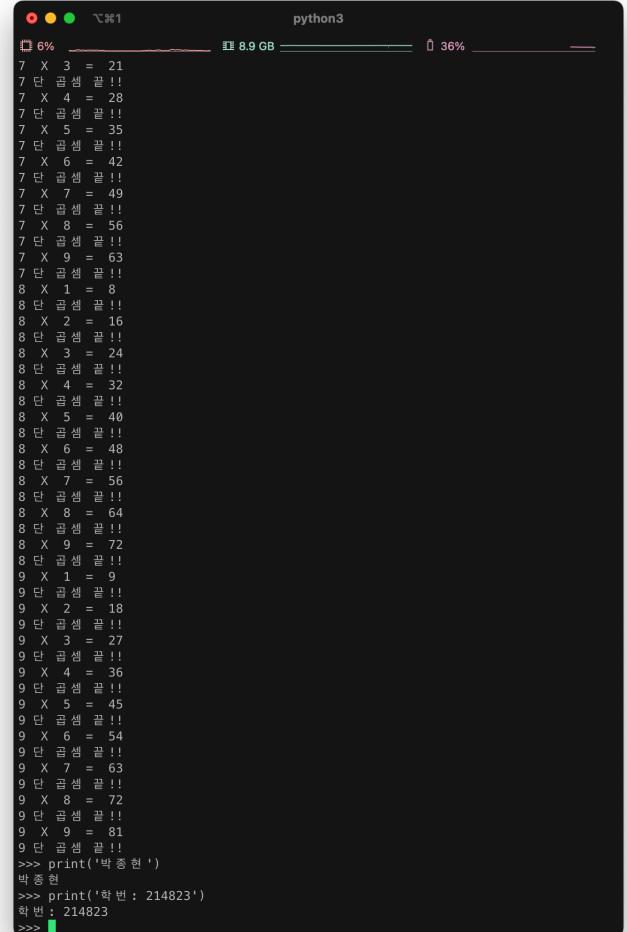


```
python3
>>> i, hap = 0, 0
>>> for i in range(1001, 2001, 2):
...     hap += i
...
>>> print('1000에서 2000까지의 홀수의 합 :', hap)
1000에서 2000까지의 홀수의 합 : 750000
>>> i, hap = 0, 0
>>> for i in range(500, 1001, 2):
...     hap += i
...
>>> print('500에서 1000까지의 홀수의 합 :', hap)
500에서 1000까지의 홀수의 합 : 188250
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```

[8] 5-2. 20-21쪽

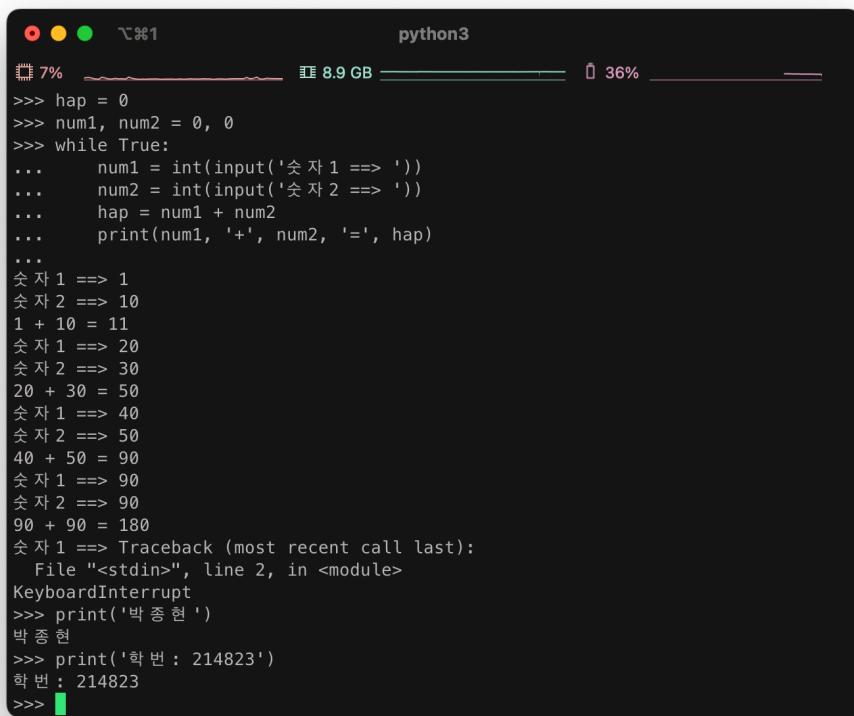


```
python3
>>> i, k = 0, 0
>>> for i in range(2, 10, 1):
...     for k in range(1, 10, 1):
...         print(i, ' X ', k, ' = ', i * k)
...         print(i, '단 곱셈 끝 !!')
...
2 X 1 = 2
2 단 곱셈 끝 !!
2 X 2 = 4
2 단 곱셈 끝 !!
2 X 3 = 6
2 단 곱셈 끝 !!
2 X 4 = 8
2 단 곱셈 끝 !!
2 X 5 = 10
2 단 곱셈 끝 !!
2 X 6 = 12
2 단 곱셈 끝 !!
2 X 7 = 14
2 단 곱셈 끝 !!
2 X 8 = 16
2 단 곱셈 끝 !!
2 X 9 = 18
2 단 곱셈 끝 !!
3 X 1 = 3
3 단 곱셈 끝 !!
3 X 2 = 6
3 단 곱셈 끝 !!
3 X 3 = 9
3 단 곱셈 끝 !!
3 X 4 = 12
3 단 곱셈 끝 !!
3 X 5 = 15
3 단 곱셈 끝 !!
3 X 6 = 18
3 단 곱셈 끝 !!
3 X 7 = 21
3 단 곱셈 끝 !!
3 X 8 = 24
3 단 곱셈 끝 !!
3 X 9 = 27
3 단 곱셈 끝 !!
4 X 1 = 4
4 단 곱셈 끝 !!
4 X 2 = 8
4 단 곱셈 끝 !!
4 X 3 = 12
4 단 곱셈 끝 !!
4 X 4 = 16
4 단 곱셈 끝 !!
4 X 5 = 20
4 단 곱셈 끝 !!
4 X 6 = 24
4 단 곱셈 끝 !!
4 X 7 = 28
```



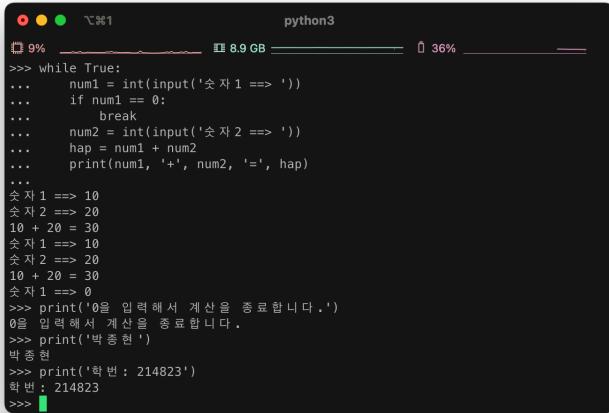
```
python3
7 X 3 = 21
7 단 곱셈 끝 !!
7 X 4 = 28
7 단 곱셈 끝 !!
7 X 5 = 35
7 단 곱셈 끝 !!
7 X 6 = 42
7 단 곱셈 끝 !!
7 X 7 = 49
7 단 곱셈 끝 !!
7 X 8 = 56
7 단 곱셈 끝 !!
7 X 9 = 63
7 단 곱셈 끝 !!
8 X 1 = 8
8 단 곱셈 끝 !!
8 X 2 = 16
8 단 곱셈 끝 !!
8 X 3 = 24
8 단 곱셈 끝 !!
8 X 4 = 32
8 단 곱셈 끝 !!
8 X 5 = 40
8 단 곱셈 끝 !!
8 X 6 = 48
8 단 곱셈 끝 !!
8 X 7 = 56
8 단 곱셈 끝 !!
8 X 8 = 64
8 단 곱셈 끝 !!
8 X 9 = 72
8 단 곱셈 끝 !!
9 X 1 = 9
9 단 곱셈 끝 !!
9 X 2 = 18
9 단 곱셈 끝 !!
9 X 3 = 27
9 단 곱셈 끝 !!
9 X 4 = 36
9 단 곱셈 끝 !!
9 X 5 = 45
9 단 곱셈 끝 !!
9 X 6 = 54
9 단 곱셈 끝 !!
9 X 7 = 63
9 단 곱셈 끝 !!
9 X 8 = 72
9 단 곱셈 끝 !!
9 X 9 = 81
9 단 곱셈 끝 !!
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```

[9] 5-2. 26쪽

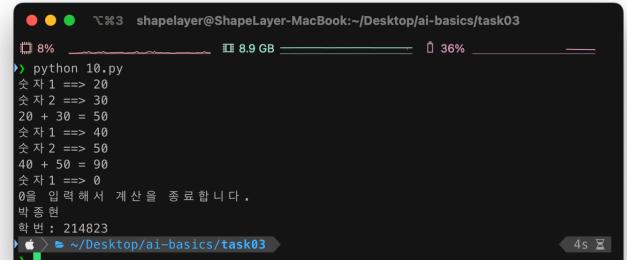


```
python3
7% 8.9 GB 36%
>>> hap = 0
>>> num1, num2 = 0, 0
>>> while True:
...     num1 = int(input('숫자 1 ==> '))
...     num2 = int(input('숫자 2 ==> '))
...     hap = num1 + num2
...     print(num1, '+', num2, '=', hap)
...
숫자 1 ==> 1
숫자 2 ==> 10
1 + 10 = 11
숫자 1 ==> 20
숫자 2 ==> 30
20 + 30 = 50
숫자 1 ==> 40
숫자 2 ==> 50
40 + 50 = 90
숫자 1 ==> 90
숫자 2 ==> 90
90 + 90 = 180
숫자 1 ==> Traceback (most recent call last):
  File "<stdin>", line 2, in <module>
KeyboardInterrupt
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>> █
```

[10] 5-2. 28쪽

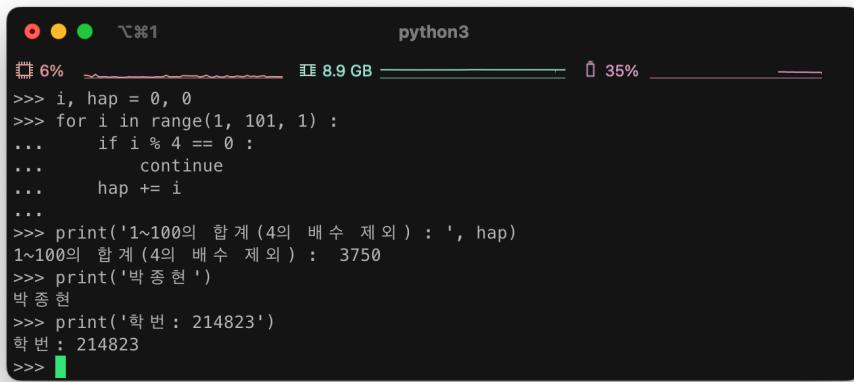


```
python3
9% 8.9 GB 36%
>>> while True:
...     num1 = int(input('숫자 1 ==> '))
...     if num1 == 0:
...         break
...     num2 = int(input('숫자 2 ==> '))
...     hap = num1 + num2
...     print(num1, '+', num2, '=', hap)
...
숫자 1 ==> 10
숫자 2 ==> 20
10 + 20 = 30
숫자 1 ==> 10
숫자 2 ==> 20
10 + 20 = 30
숫자 1 ==> 0
>>> print('0을 입력해서 계산을 종료합니다.')
0을 입력해서 계산을 종료합니다.
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>> █
```



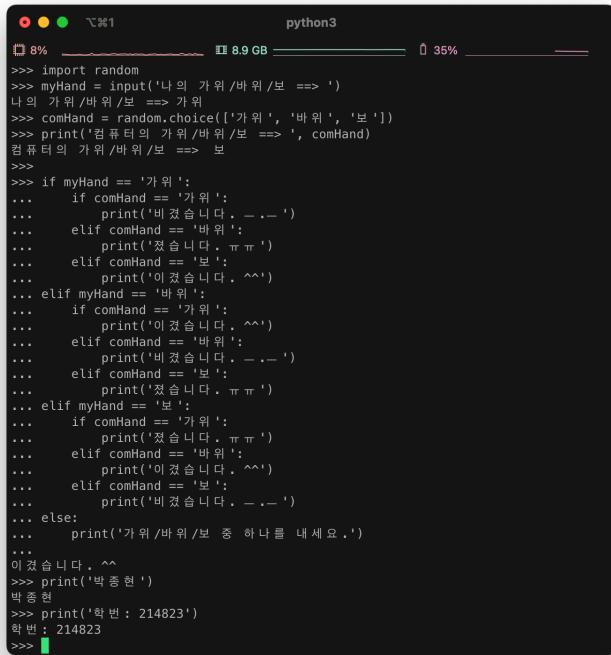
```
python3
8% 8.9 GB 36%
> python 10.py
숫자 1 ==> 20
숫자 2 ==> 30
20 + 30 = 50
숫자 1 ==> 40
숫자 2 ==> 50
40 + 50 = 90
숫자 1 ==> 0
0을 입력해서 계산을 종료합니다.
박종현
학번: 214823
> █
```

[11] 5-2. 30쪽

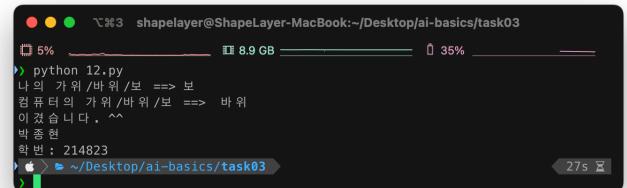


```
python3
6% 8.9 GB 35%
>>> i, hap = 0, 0
>>> for i in range(1, 101, 1) :
...     if i % 4 == 0 :
...         continue
...     hap += i
...
>>> print('1~100의 합계 (4의 배수 제외) : ', hap)
1~100의 합계 (4의 배수 제외) :  3750
>>> print('박종현')
박종현
>>> print('학번 : 214823')
학번 : 214823
>>>
```

[12] 5-3. 2-8쪽

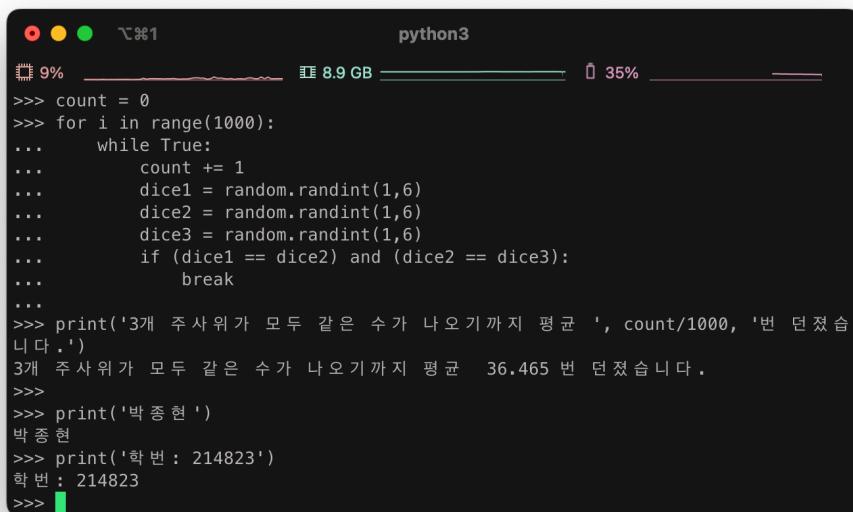


```
python3
8% 8.9 GB 35%
>>> import random
>>> myHand = input('나의 가위/바위/보 ==> ')
나의 가위/바위/보 ==> 가위
>>> comHand = random.choice(['가위', '바위', '보'])
>>> print('컴퓨터의 가위/바위/보 ==> ', comHand)
컴퓨터의 가위/바위/보 ==> 보
>>>
>>> if myHand == '가위':
...     if comHand == '가위':
...         print('비겼습니다. -.-')
...     elif comHand == '바위':
...         print('졌습니다. ㅠㅠ')
...     elif comHand == '보':
...         print('이겼습니다. ^_^')
... elif myHand == '바위':
...     if comHand == '가위':
...         print('이겼습니다. ^_^')
...     elif comHand == '바위':
...         print('비겼습니다. -.-')
...     elif comHand == '보':
...         print('졌습니다. ㅠㅠ')
... elif myHand == '보':
...     if comHand == '가위':
...         print('졌습니다. ㅠㅠ')
...     elif comHand == '바위':
...         print('이겼습니다. ^_^')
...     elif comHand == '보':
...         print('비겼습니다. -.-')
... else:
...     print('가위/바위/보 중 하나를 내세요.')
...
이겼습니다. ^
>>> print('박종현')
박종현
>>> print('학번 : 214823')
학번 : 214823
>>>
```



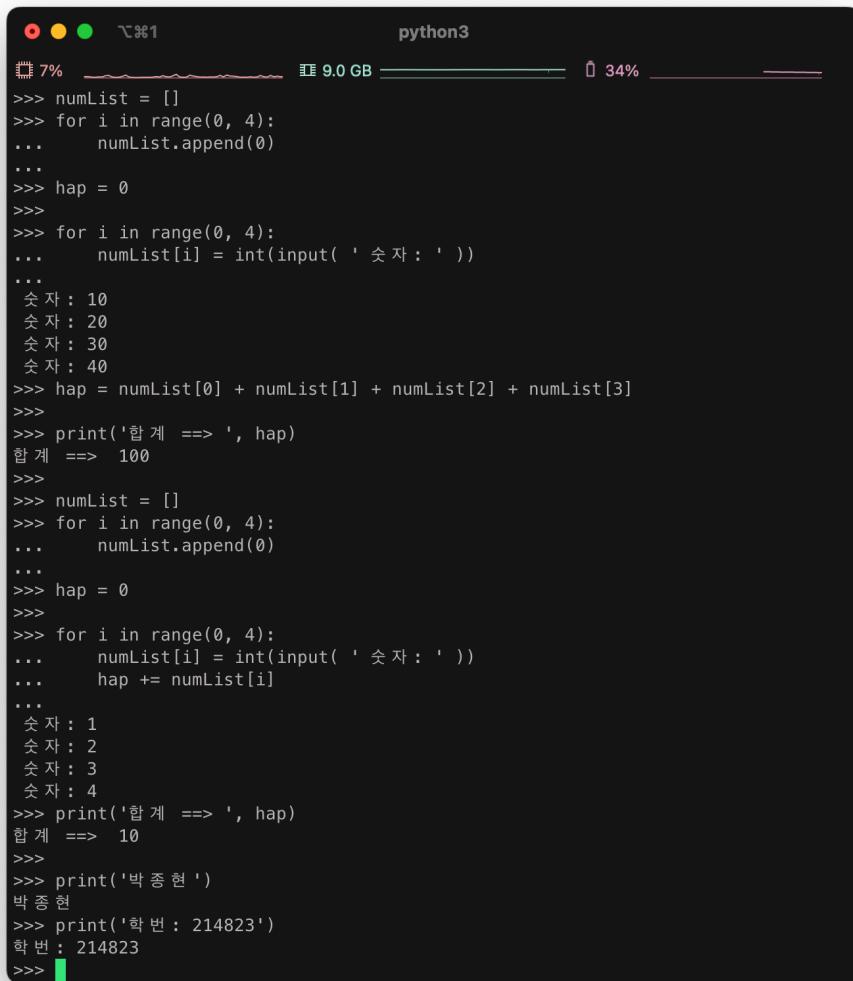
```
shapeLayer@ShapeLayer-MacBook:~/Desktop/ai-basics/task03
5% 8.9 GB 35%
>> python 12.py
나의 가위/바위/보 ==> 보
컴퓨터의 가위/바위/보 ==> 바위
이겼습니다. ^
박종현
학번 : 214823
> 275 ↵
```

[13] 5-3. 13-15쪽



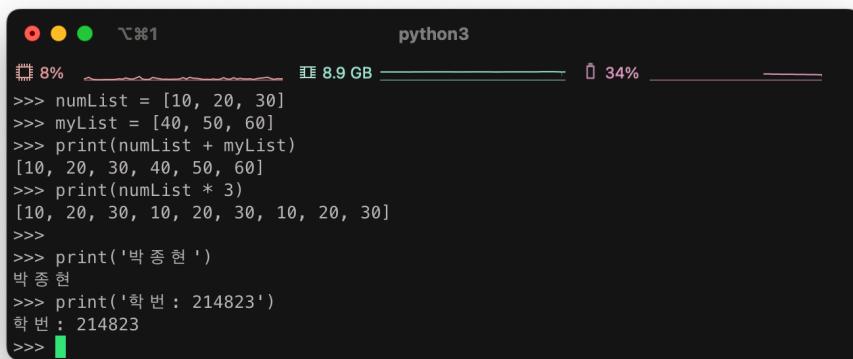
```
python3
9% 8.9 GB 35%
>>> count = 0
>>> for i in range(1000):
...     while True:
...         count += 1
...         dice1 = random.randint(1,6)
...         dice2 = random.randint(1,6)
...         dice3 = random.randint(1,6)
...         if (dice1 == dice2) and (dice2 == dice3):
...             break
...
>>> print('3개 주사위가 모두 같은 수가 나오기까지 평균 ', count/1000, '번 던졌습니다.')
3개 주사위가 모두 같은 수가 나오기까지 평균 36.465 번 던졌습니다.
>>>
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```

[14] 6-1. 12-13쪽



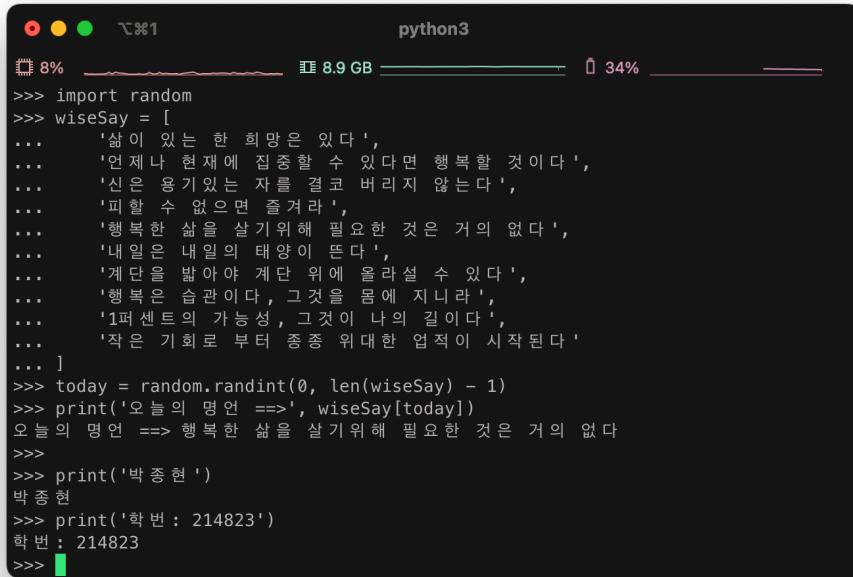
```
python3
7% 9.0 GB 34%
>>> numList = []
>>> for i in range(0, 4):
...     numList.append(0)
...
>>> hap = 0
>>>
>>> for i in range(0, 4):
...     numList[i] = int(input('숫자: '))
...
숫자: 10
숫자: 20
숫자: 30
숫자: 40
>>> hap = numList[0] + numList[1] + numList[2] + numList[3]
>>>
>>> print('합계 ==> ', hap)
합계 ==> 100
>>>
>>> numList = []
>>> for i in range(0, 4):
...     numList.append(0)
...
>>> hap = 0
>>>
>>> for i in range(0, 4):
...     numList[i] = int(input('숫자: '))
...     hap += numList[i]
...
숫자: 1
숫자: 2
숫자: 3
숫자: 4
>>> print('합계 ==> ', hap)
합계 ==> 10
>>>
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```

[15] 6-1. 20쪽



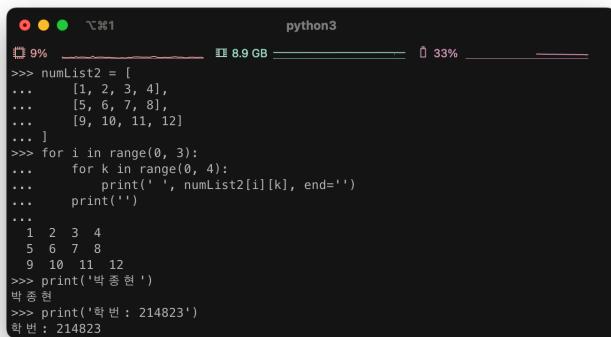
```
python3
8% 8.9 GB 34%
>>> numList = [10, 20, 30]
>>> myList = [40, 50, 60]
>>> print(numList + myList)
[10, 20, 30, 40, 50, 60]
>>> print(numList * 3)
[10, 20, 30, 10, 20, 30, 10, 20, 30]
>>>
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```

[16] 6-1. 21 22쪽

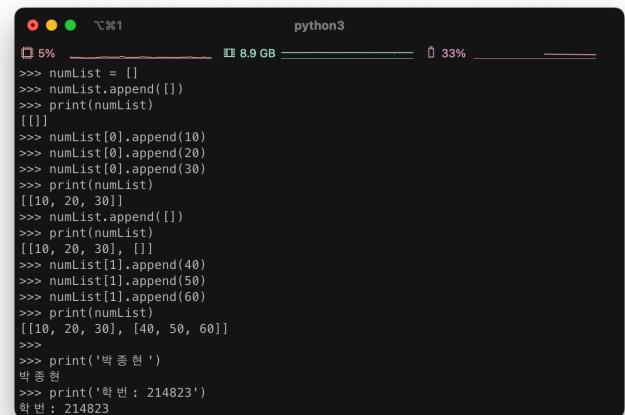


```
python3
8% 8.9 GB 34%
>>> import random
>>> wiseSay = [
...     '삶이 있는 한 희망은 있다',
...     '언제나 현재에 집중할 수 있다면 행복할 것이다',
...     '신은 용기 있는 자를 결코 버리지 않는다',
...     '피할 수 없으면 즐겨라',
...     '행복한 삶을 살기 위해 필요한 것은 거의 없다',
...     '내일은 내일의 태양이 뜬다',
...     '계단을 밟아야 계단 위에 올라설 수 있다',
...     '행복은 습관이다, 그것을 몸에 지니라',
...     '1퍼센트의 가능성, 그것이 나의 길이다',
...     '작은 기회로 부터 종종 위대한 업적이 시작된다'
... ]
>>> today = random.randint(0, len(wiseSay) - 1)
>>> print('오늘의 명언 ==>', wiseSay[today])
오늘의 명언 ==> 행복한 삶을 살기 위해 필요한 것은 거의 없다
>>>
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```

[17] 6-2. 17 20쪽



```
python3
9% 8.9 GB 33%
>>> numList2 = [
...     [1, 2, 3, 4],
...     [5, 6, 7, 8],
...     [9, 10, 11, 12]
... ]
>>> for i in range(0, 3):
...     for k in range(0, 4):
...         print(' ', numList2[i][k], end='')
...     print('')
...
1 2 3 4
5 6 7 8
9 10 11 12
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
```



```
python3
5% 8.9 GB 33%
>>> numList = []
>>> numList.append([1])
>>> print(numList)
[[1]]
>>> numList[0].append(10)
>>> numList[0].append(20)
>>> numList[0].append(30)
>>> print(numList)
[[10, 20, 30]]
>>> numList.append([])
>>> print(numList)
[[10, 20, 30], []]
>>> numList[1].append(40)
>>> numList[1].append(50)
>>> numList[1].append(60)
>>> print(numList)
[[10, 20, 30], [40, 50, 60]]
>>>
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
```

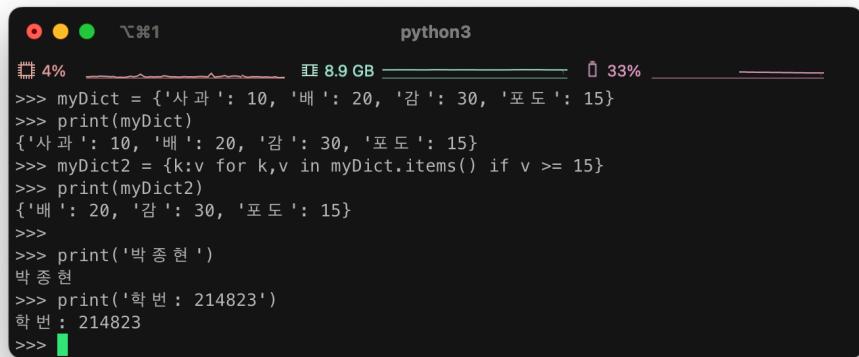
```
python3
7% 8.9 GB 33%
>>> numList=[]
>>> for i in range(3):
...     row = []
...     for j in range(3):
...         row.append(i+j)
...     numList.append(row)
...
>>> print(numList)
[[0, 1, 2], [1, 2, 3], [2, 3, 4]]
>>> numList[2][1]
3
>>> numList[2][0]
2
>>> numList[0][1]
1
>>>
>>> print('박종현')
박종현
>>> print('학번 : 214823')
학번 : 214823
>>>
```

```
python3
7% 8.9 GB 33%
>>> numList = [[0 for j in range(3)] for i in range(3)]
[[0, 0, 0], [0, 0, 0], [0, 0, 0]]
>>> for i in range(len(numList)):
...     for j in range(len(numList[i])):
...         numList[i][j] = i + j
...
>>> print(numList)
[[0, 1, 2], [1, 2, 3], [2, 3, 4]]
>>>
>>> print('박종현')
박종현
>>> print('학번 : 214823')
학번 : 214823
>>>
```

[18] 6-2. 22 24쪽

```
python3
5% 8.9 GB 33%
>>> numList = [[[0, 1], [1, 2]], [[1, 2], [2, 3]]]
>>> print(numList[0][0][0])
0
>>> print(numList[0][0])
[0, 1]
>>> print(numList[0])
[[0, 1], [1, 2]]
>>> print(numList[1][0][1])
2
>>> print(numList[1][1][1])
3
>>> print(numList[1][1])
[2, 3]
>>>
>>>
>>> numList=[]
>>> for i in range(2):
...     matrix = []
...     for j in range(2):
...         row = []
...         for k in range(2):
...             row.append(i + j + k)
...         matrix.append(row)
...     numList.append(matrix)
...
>>> print(numList)
[[[0, 1], [1, 2]], [[1, 2], [2, 3]]]
>>>
>>> numList=[[[[0 for col in range(2)] for row in range(2)] for depth in range(2)]]
>>> print(numList)
[[[[0, 0], [0, 0]], [[0, 0], [0, 0]]]
>>>
>>> for depth in range(len(numList)):
...     for row in range(len(numList[depth])):
...         for col in range(len(numList[depth][row])):
...             numList[depth][row][col]=depth+row+col
...
>>> print(numList)
[[[0, 1], [1, 2]], [[1, 2], [2, 3]]]
>>>
>>> print('박종현')
박종현
>>> print('학번 : 214823')
학번 : 214823
>>>
```

```
python3
9% 9.0 GB 33%
>>> numTup1 = (10, 20, 30, 40)
>>> print(numTup1[0])
10
>>> print(numTup1[0] + numTup1[1] + numTup1[2])
60
>>>
>>>
>>> print(numTup1[1:3])
(20, 30)
>>> print(numTup1[1:])
(20, 30, 40)
>>> print(numTup1[:3])
(10, 20, 30)
>>>
>>>
>>> numTup2 = ('A', 'B')
>>> print(numTup1 + numTup2)
(10, 20, 30, 40, 'A', 'B')
>>> print(numTup2 * 3)
('A', 'B', 'A', 'B', 'A', 'B')
>>>
>>>
>>> numTup = (10, 15, 20, 30, 20, 15, 15)
>>> numTup.count(15)
3
>>> numTup.count(20)
2
>>> numTup.index(15)
1
>>> numTup.index(20)
2
>>>
>>>
>>> numTup = (10, 15, 20, 30, 20, 15, 15)
>>> print(numTup)
(10, 15, 20, 30, 20, 15, 15)
>>> numList = list(numTup)
>>> print(numList)
[10, 15, 20, 30, 20, 15, 15]
>>> numList.sort()
>>> print(numList)
[10, 15, 15, 20, 20, 30]
>>> numList.remove(15)
>>> print(numList)
[10, 15, 15, 20, 20, 30]
>>> numTup = tuple(numList)
>>> print(numTup)
(10, 15, 15, 20, 20, 30)
>>>
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```



python3

```
python3
4% 8.9 GB 33%
>>> myDict = {'사과': 10, '배': 20, '감': 30, '포도': 15}
>>> print(myDict)
{'사과': 10, '배': 20, '감': 30, '포도': 15}
>>> myDict2 = {k:v for k,v in myDict.items() if v >= 15}
>>> print(myDict2)
{'배': 20, '감': 30, '포도': 15}
>>>
>>> print('박종현')
박종현
>>> print('학번: 214823')
학번: 214823
>>>
```