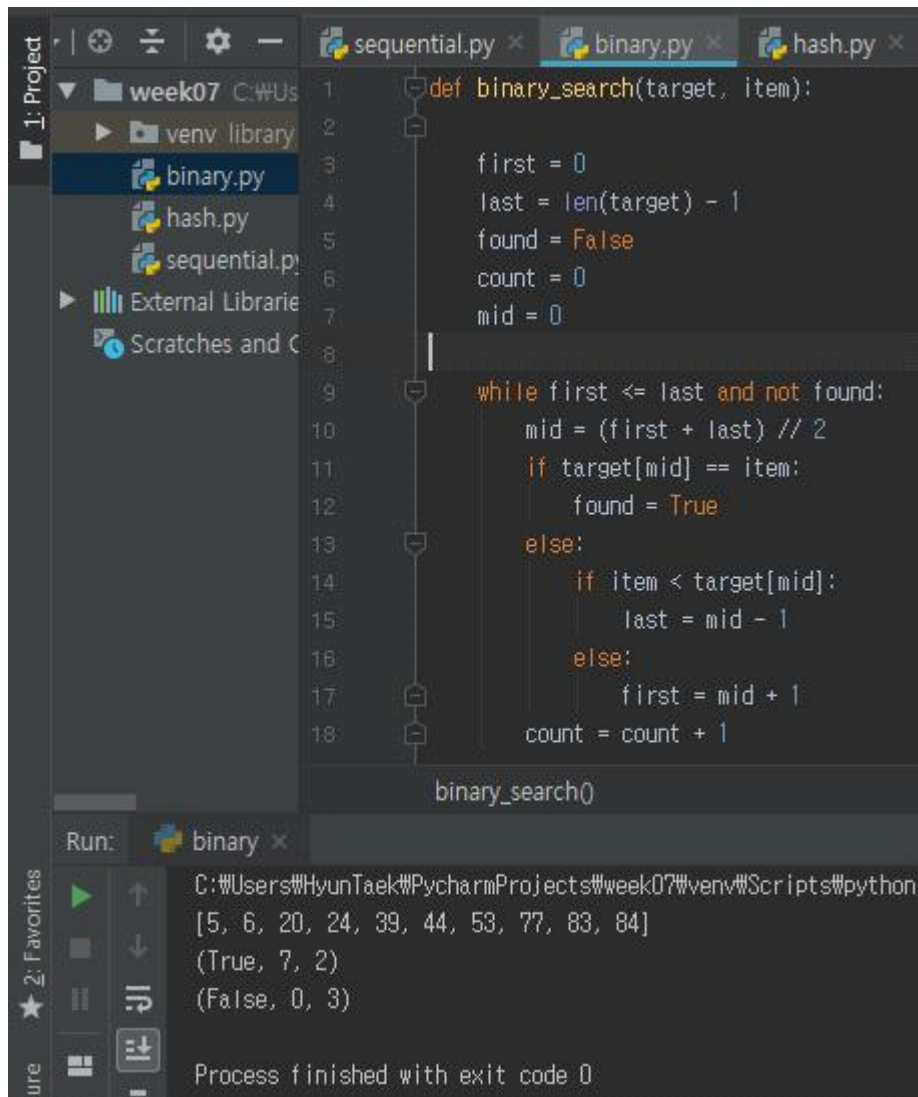


201201871 서현택

1. Binary

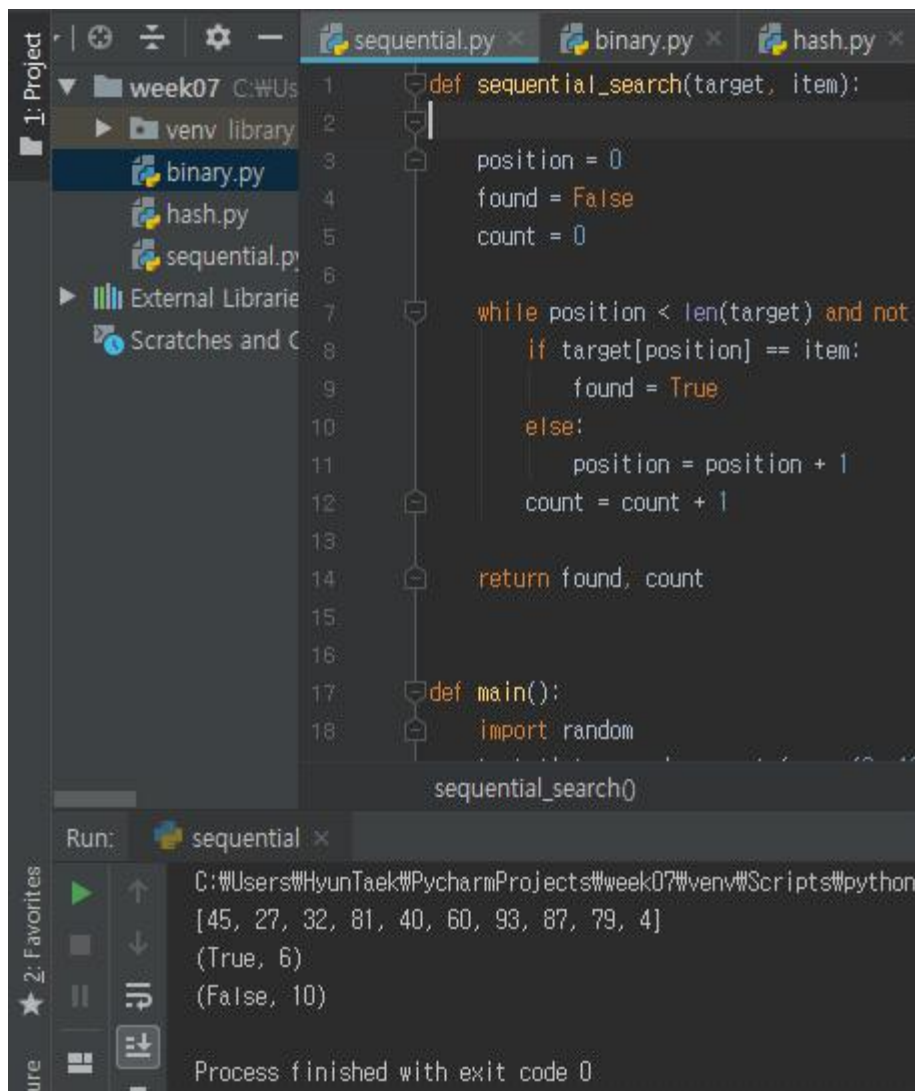


```
1 def binary_search(target, item):
2
3     first = 0
4     last = len(target) - 1
5     found = False
6     count = 0
7     mid = 0
8
9     while first <= last and not found:
10         mid = (first + last) // 2
11         if target[mid] == item:
12             found = True
13         else:
14             if item < target[mid]:
15                 last = mid - 1
16             else:
17                 first = mid + 1
18         count = count + 1
```

Run: binary x

C:\Users\HyunTaek\PycharmProjects\week07\venv\Scripts\python
[5, 6, 20, 24, 39, 44, 53, 77, 83, 84]
(True, 7, 2)
(False, 0, 3)
Process finished with exit code 0

2. Sequential



3. Hash

```
1 class HashTable:
2     def __init__(self):
3         self.size = 11
4         self.slots = [None] * self.size
5         self.data = [None] * self.size
6
7     def put(self, key, data):
8         hashvalue = self.hashfunction(key, len(self.slots))
9
10        if self.slots[hashvalue] == None:
11            self.slots[hashvalue] = key
12            self.data[hashvalue] = data
13        else:
14            if self.slots[hashvalue] == key:
15                self.data[hashvalue] = data #replace
16            else:
17                nextslot = self.rehash(hashvalue, len(self.slots))
18                while self.slots[nextslot] != None and self.slots[nextslot] != key:
19                    nextslot = self.rehash(nextslot, len(self.slots))
20                self.slots[nextslot] = key
21                self.data[nextslot] = data
```

Run: hash ×

C:\Users\HyunTaek\PycharmProjects\week07\venv\Scripts\python.exe C:/Users/HyunTaek/Py
[77, 44, 55, 20, 26, 93, 17, None, None, 31, 54]
['bird', 'goat', 'pig', 'chicken', 'dog', 'lion', 'tiger', None, None, 'cow', 'cat']
chicken
tiger
duck
None
Process finished with exit code 0