# Assignment 5

# Problem 1

**Author: Jade YEH**

```python
def recursion():
    num = b(5, 2)
    print(num)


def b(n, k):
    if k == 0 or k == n:
        print('Base Case!')
        return 2
    else:
        return b(n-1, k-1)



if __name__ == '__main__':
    recursion()
```

1. 請問執行這段程式碼會在 Console 上看到幾遍 "Base Case!"?

2. 變數 num 數值是多少?

See next page for the answer.

Base Case: 10 Times
num = 20

b(5, 2) == 20
8  12
b(4, 1)+b(4, 2)

b(4, 1)
2  6
b(3, 0)+b(3, 1)

b(4, 2)
6  6
b(3, 1)+b(3, 2)

b(3, 1)
2  4
b(2, 0)+b(2, 1)

b(3, 1)
2  4
b(2, 0)+b(2, 1)

b(3, 2)
4  2
b(2, 1)+b(2, 2)

b(2, 1)
2  2
b(1, 0)+b(1, 1)

b(2, 1)
2  2
b(1, 0)+b(1, 1)

b(2, 1)
2  2
b(1, 0)+b(1, 1)