WEEK4 REVIEW

201711701 - 정지현 201711688 - 임이현
201711693 - 장우혁 201711677 - 이정하

30 lines (23 sloc) | 589 Bytes

```python
def combination(n, r):
    if r == 0:
        return 1
    elif n == r:
        return 1
    elif n < r:
        return 0
    else:
        return combination(n-1, r) + combination(n-1, r - 1)


def factorial(n):
    facto = 1
    for i in range(n, 0, -1):
        facto *= i
    return facto


def combinationf(n, r):
    return int(factorial(n) / (factorial(r) * factorial(n - r)))


n = int(input("Enter n: "))
r = int(input("Enter r: "))

if n < 0 or r < 0:
    print("양수를 입력하세요")
else:
    print("C(n, r):", combination(n, r))
    print("C(n, r):", combinationf(n, r))
```

36 lines (29 sloc) | 821 Bytes

```python
def combination(n, r):
    if r == 0:
        return 1
    elif n == r:
        return 1
    elif n < r:
        return 0
    else:
        return combination(n-1, r) + combination(n-1, r - 1)


def factorial(n):
    facto = 1
    for i in range(n, 0, -1):
        facto *= i
    return facto


def combinationf(n, r):
    return int(factorial(n) / (factorial(r) * factorial(n - r)))


while True:
    try:
        n = int(input("Enter n: "))
        r = int(input("Enter r: "))

        if n == -1 or r == -1:
            break
        elif n < 0 or r < 0:
            print("양수를 입력하세요")
        else:
                print("C(%d, %d): %d" % (n, r, combination(n,r)))
                print("C(%d, %d): %d" % (n, r, combinationf(n, r)))
    except ValueError:
        print("숫자를 입력해주세요")
```

201711701 - 정지현

32 week4/assignment4_20171693.py

View

@@ -2,20 +2,30 @@

```
 def Combination(n, m):
     if n == 0 or m == 0:
         return 0
-    if n == m:
+    elif n < -1 or m < -1:
+        return 0
+    elif n == m:
         return 1
     elif m == 1:
         return n
     else:
         return Combination(n - 1, m) + Combination(n - 1, m - 1)
-n=0
-m=0
+n = 0
+m = 0
 while True:
-    n = int(input("Enter n:"))
-    m = int(input("Enter m:"))
-    if n == -1:
-        break
-    elif m > n:
-        print("ERROR")
-        continue
-    print("C(%d,%d) =" %(n, m),Combination(n, m))
+    try:
+        n = int(input("Enter n:"))      # n 또는 m 이 -1일 시 무조건 그 순간 break 처리
+        if n == -1:
+            break
+        m = int(input("Enter m:"))
+        if m == -1:
+            break
+        if m < -1 or n < -1:
+            print("C(%d,%d) =" % (n, m), Combination(n, m)) #음수일 시 return 0으로 처리해주기 위함(m > n 아닐 경우를 위해
+        else:
+            if m > n:
+                print("ERROR")
+                continue
+            print("C(%d,%d) =" % (n, m), Combination(n, m))
+    except:
+        print("VALUE ERROR")
```

20171693 - 장우혁

21 lines (17 sloc) | 431 Bytes

```python
def facto(n):
    f = 1
    for i in range (1,n+1) :
        f *= i
    return f

def combination(n, m):
    return int(facto(n) / (facto(m) * facto(n - m)))

def calculate(n, m):
    if (m == 0 or n==m):
        return 1
    elif n < m:
        return 0
    else:
         return combination(n - 1, m) + combination(n - 1, m - 1)


n = int(input("Enter n:"))
m = int(input("Enter m: "))
print( calculate(n, m))
```

```python
#  *fectorial

# def facto(n):
#     f = 1
#     for i in range (1,n+1) :
#         f *= i
#     return f
#
# def combination(n, m):
#     return int(facto(n) / (facto(m) * facto(n - m)))

def calculate(n, m):
    if (m == 0 or n==m):
        return 1
    elif n < m:
        return 0
    else:
         return calculate(n - 1, m) + calculate(n - 1, m - 1)


while (1):
    try:
        n = int(input("Enter n:"))
        m = int(input("Enter m: "))
        if n == -1:
            break
        elif n<=0 or m< 0 :
            print(" \tn>0이어야 하고 m>=0 이어야 합니다.\n\t값을 다시 입력해주세요.")
            continue
        elif n>0 or m>=0:
            break

    except ValueError:
        print("값을 입력해주세요.")


print( calculate(n, m))
```

20171688 - 임이현

Executable File | 34 lines (24 sloc) | 730 Bytes

```python
# 20171677 이정하
# assignment4 :조합으로 factorial 만들기

def combination_recursive(n, r):
    if n == 0 or r == 0:
        return 1
    elif n < r:
        return 0
    elif n == r:
        return 1
    else:
        return combination_recursive(n-1, r) + combination_recursive(n-1, r-1)


while True:
    try:
        n = int(input("Enter n : "))

        if n == -1:
            break
        m = int(input("Enter m : "))

        if n < 0 or m < 0:
            print("정확한 값을 입력해주세요")
            continue

    except ValueError:
        print("숫자를 입력해주세요")
        continue

    print("C(%d,%d) = %d" %(n, m, combination_recursive(n, m)))

```

20171677 - 이정하