

Assignment 07 – Recursion Combos
Due Wednesday, Nov 18th, 5pm.

Read programming project 6 on page 439. Write & document a Java class called **Combinatorics** containing the methods:

```
static long choose(int n, int k)
```

The **choose** method should either directly or indirectly use recursion (i.e. it should either be recursive or use some other method that is recursive).

Note: if you make additional helper methods, they must also be documented.

Note: the text gives a clue by expanding the formula for $n!$. Try substituting this expansion into the formula for $\text{choose}(n,k)$ and look for a recursive pattern among the terms. If the values for either n or k are inappropriate, you should throw an exception.

Put a copy of your **entire project folder** into a **.zip** file named **CS225-AXX-YOURNAME.zip**, replacing **YOURNAME** with your actual first and last name & **XX** with the assignment number.

Upload the **.zip** to Moodle.

Description	Points
Correct filename(s) are used	1
Source code content – Combinatorics class implemented as indicated in text / documentation	5
Source code content – tester class exercises all the methods of Combinatorics	3
Source code compiles without errors	2
Program executes	2
Program output is correct	5
Tester class, method(s) & parameters are documented	2
TOTAL POSSIBLE POINTS:	20