Notes chapter 7

Show 4 basic rules of recursion

Recursion is a method that calls itself

Rule 1
Have to have a base case that most likely will equal 1

Ruel 2
Has to make progress each one has to be smaller than the last

Rule 3
You got to believe that you method will always work
Make recursive call private so people cant mess it up also will have a public one other people can use.

Rule 4

Palindrome string length base case 1 and base 0

Factorial
N! si the product of the first N integers
Base case is 1 else you could factorial of n-1

Binary search
What is the N that changes find out the size of the array. Base case if the array is 1 or zero. Will need the starting index and ending index.

Koch Curve
Add a bump to each line

Backtracking
recursion is really good at giving up. If someone reaches a dead end then they can just go ahead and give up and let someone else deal with it.

Maze problem due Monday start on Friday
Format of a 2D array, will give a starting a point of x and y as integers.
Gonna see if there is a path from the starting point to the ending point.
Don't do for loops. Do recursion
Start with the base case to see if you are right at the end.
Will have columns and rows
Will have S which is Start and E which is finish
A . Is an open space
is a wall
Another base case if you are on a wall(#) then give up.
If you S position is less then zero then you fell off

Great then number of columns
Greater then rows is bad