Recursion

Extra credit assignment (worth 1 point in the quiz category)

Do the following **five** recursion problems

From https://practiceit.cs.washington.edu:

- use the keyword “recursive tracing” and do 143 Practice Midterm 1:

recursiveTracing

Language/Type: Java recursion recursive tracing
Author: Robert Baxter

For each call to the following method, indicate what value is returned:

```
public static int mystery(int n) {
    if (n < 0) {
        return -mystery(-n);
    } else if (n < 10) {
        return (n + 1) % 10;
    } else {
        return 10 * mystery(n / 10) + (n + 1) % 10;
    }
}
```

- Use the keyword “recursive programming” and do

143 Practice Midterm 4	digitsSorted	Java	○ no

From https://codingbat.com:

- select Java -> Recursion 1 and do bunnyEars, powerN and countHi2

Java | Python

Recursion-1 ☆☆☆☆☆☆☆☆☆ chance

Basic recursion problems. Recursion strategy: first test for one or two base cases that are so simple, the answer can be returned immediately. Otherwise, make a recursive a call for a smaller case (that is, a case which is a step towards the base case). Assume that the recursive call works correctly, and fix up what it returns to make the answer.

factorial H	bunnyEars H	fibonacci
bunnyEars2	triangle	sumDigits
count7	count8	powerN
countX	countHi	changeXY
changePi	noX	array6
array11	array220	allStar
pairStar	endX	countPairs
countAbc	count11	stringClean
countHi2	parenBit	nestParen
strCount	strCopies	strDist

For each problem, include a screenshot of your work in a text file and upload your work to Canvas as a pdf file by the due date given on the class website.

Good luck!