This is at the top so you don't miss it! Presenting this to me is worth 10 points!

Problem 1 (30 points)

Given an amount of money, calculate how many ways there are to make change using pennies, nickels, dimes, and quarters. Your function must be recursive, and you are not allowed loops.

Change	Output	
5	2	1 nickel, 5 pennies
10	4	1 dime 2 nickels 1 nickel + 5 pennies 10 pennies
25	13	1 quarter 2 dimes + 1 nickel 2 dimes + 5 pennies 1 dime + 3 nickels 1 dime + 2 nickels + 5 pennies 1 dime + 1 nickel + 10 pennies 1 dime + 15 pennies 5 nickels 4 nickels + 5 pennies 3 nickels + 10 pennies 2 nickels + 15 pennies 1 nickel + 20 pennies 25 pennies

Problem 2 (20 points)

Write a recursive function that will reverse the elements of an array in place (no creating a 2nd array!)

Problem 3 (20 points)

Write a recursive function that will extract all capital letters from a string read from a file and return them as one string. Your function should return a string. Hint: Do not read the file inside of the recursive function!

Problem 4 (10 points)

```
void ProblemFour(int a){
	int big_array[a][a];//Assume it is fully populated

	for(int i = 0; i < a; i++){
		for(int j = 0; j < a; j++){
			std::cout<<big_array[i][j];
		}
	}

	for(int k = 0; k < a; k++){
		std::cout<<big_array[i][j];
	}
}
```

Problem 5 (10 points)

```
void ProblemFive(int array[], int a){
	for(int i = 0; i < array.length(); i++){
		std::cout<<array[i];
	}

	for(int i = 0; i < array.length(); i++){
		std::cout<<array[i];
	}

	int big_array[a][a];//Assume it is fully populated
	for(int i = 0; i < a; i++){
		for(int j = 0; j < a; j++){
			std::cout<<array[i][j];
		}
	}
}
```