

lyen Read

CS 161 Recitation

Quiz #8

8

(4pts) If 2 is passed into recPrint() and recPrint2(), trace and give the output for each function (assuming an otherwise complete program):

```
void recPrint(int num){
    if (num < 0) // num less than 0
        return;
    recPrint(num - 1);
    cout << num; // will print -1
}
```

recPrint(1) → recPrint(2) → rpo → (p-1)

```
void recPrint2(int num){
    if (num < 0) // num less than 0
        return;
    recPrint2(--num);
    cout << num;
}
```

rec decrement, same as num-1

Same, will print -1

(2 pts) Answer the following questions.

- Where is static memory located?

Stack

- Where is dynamic memory located?

HEAP

(2 pts) Answer the following questions.

- If you want to get to the first value in an array, what index number are you accessing?

0

- If 'len' is equal to the current size of your array, what is the index of the last value?

(len-1)

(2 pts) Declare an array of 17 chars on the stack: static

~~static~~ ~~int arr[17];~~

char arr[17]; NO TERMINATOR,

if terminator req'd, use char[18]...

Extra Credit: (2 pt) Allocate and deallocate a 1D array of size x on the heap without any memory leaks. Assume that the array holds integers.

```
int main(x){
    int* arr = new int[x];
```

delete[] arr;

}