

Quiz 5 Version B

Due No due date
Time Limit None

Points 8
Questions 3
Allowed Attempts Unlimited

Available after Nov 11 at 1pm

Instructions

Quiz for Lecture 5: Recursion

7 points required to pass

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	less than 1 minute	0 out of 8 *

* Some questions not yet graded

Score for this attempt: **0** out of 8 *

Submitted Nov 28 at 2:28pm

This attempt took less than 1 minute.

Question 1

Not yet graded / 2 pts

The sum of integers from 1 through N is simply:

$$1 + 2 + 3 + \dots + N$$

This can be defined recursively as:

$$\text{Sum}(1) == 1$$

$$\text{Sum}(N) = \text{Sum}(N - 1) + N, \text{ for } N > 0$$

Write a **recursive** implementation of this sum of integers function named

Sum:

unsigned Sum(unsigned N)

{

// your code goes here

}

Your Answer:

```
if (N == 1) return 1;
return Sum(N - 1) + N;
```

Question 2

Not yet graded / 2 pts

Write a **recursive** implementation of the function **put_str_rev**, that takes a C-string as its argument, and that displays the characters in the C-string to the screen *in reverse order*.

For example, this code in **main**:

```
char a[10] = "hello";
```

```
put_str_rev(a);
```

would display:

olleh

```
void put_str_rev(const char *s)
```

```
{  
    // your code goes here  
}
```

Your Answer:

```
if (*s) {  
    put_str_rev(s + 1);  
    cout << *s;  
}
```

Question 3

Not yet graded / 4 pts

Define a function named **put_int_bits** that takes an **int** value as its argument, and that displays the 32-bit binary representation of that **int** value to **cout**:

```
0    00000000000000000000000000000000  
7    00000000000000000000000000000111  
13   000000000000000000000000000001101  
-1   11111111111111111111111111111111
```

put_int_bits returns no value. It may be useful to have **put_int_bits** call one or more helper functions. At least one function in your implementation should be a **recursive** function.

Your Answer:

fdsa

```
void put_int_bit_n(unsigned i, unsigned n)
{
    if (n) {
        put_int_bit_n(i / 2, n - 1);
        cout << i % 2;
    }
}

void put_int_bits(int i)
{
    put_int_bit_n(i, 32);
}
```

Quiz Score: **0** out of 8