CS107 Final Exam
Answer Booklet

CS107 Fall 2019 – Instructor: Nick Troccoli

You may not use any internet devices. You will be graded on functionality – but good style saves time and helps graders understand what you were attempting. You have 180 minutes. We hope this exam is an exciting journey.

Note: Only work in this answer booklet will be graded. The backs of pages are available as space for each problem as well.

First Name: _____

Last Name: _____

SUNET ID (part before @stanford.edu): _____

By signing below, I commit to the letter and spirit of the honor code. I agree not to access any unauthorized resources or swap to any other applications for the duration of the exam.

_____
Sign here

Problem 1A

Problem 1B

Problem 1C

Problem 1D

Problem 2

```
// Blank 1
```

```
// Blank 2
```

```
// Blank 3
```

```
// Blank 4
```

```
// Blank 5
```

Problem 3

A) Fill in the blanks below

```
int bar(long i, int *x) {

    return _____;

}

int foo(long max, int counter) {

    int sum = 0;

    int x = _____;

    for (long i = _____; i < _____; _____) {

        if (_____) {

            sum += _____;

        } else {

            sum += _____;

        }

    }

    return _____;
}
```

B)

C)

D)

Problem 4A

Problem 4B

Problem 4C

Problem 4D

Problem 5A

```
bool is_used(zone_header *header) {
    // your implementation here
```

Problem 5B

```
size_t get_size(zone_header *header) {
    // your implementation here
```

Problem 5C

```
void set_status(zone_header *header, int new_status) {
    // your implementation here
```

Problem 5D

```
zone_header *get_right_header(zone_header *header) {
    // your implementation here
```

Problem 5E

```c
void *malloc_within_zone(zone_ptr *zone, size_t size) {
    // your implementation here
```

Problem 5F

```
void set_next(zone_header *free_header, zone_header *next) {
    // your implementation here
```

Problem 5G

```
// parameter 1
```

```
// parameter 2
```

```
// parameter 3
```

Problem 5H

```
size_t get_size(zone_header *header) {
      // your implementation here
```