

CS9 Coding Drill: January 20, 2015

Name: _____

Over the course of this quarter, we'll be giving out a series of coding drills to help you review important programming concepts and get comfortable writing code on paper. Please work through the following problems on your own and give them the best effort you can.

Problem One: strstr

The strstr function has the following prototype:

```
char* strstr(char* haystack, const char* needle);
```

This function searches for the first occurrence of the string needle in the string haystack. If the needle is found, strstr returns a pointer to its first occurrence. If not, strstr returns NULL as a sentinel.

Write your own implementation of strstr in the space below. (Note: If you haven't taken CS107, implement this function in a language of your own choosing).

```
char* strstr(char* haystack, const char* needle) {
```

Problem Two: Reversing a Linked List

Suppose that you have the following struct definition for a linked list cell:

```
struct Cell {  
    int data;  
    struct Cell* next;  
};
```

Write a function

```
struct Cell* reverseList(struct Cell* head);
```

This function should take as input a pointer to the first cell in the list. It should then modify the list by reversing it, then return a pointer to the first cell in the resulting list.

```
struct Cell* reverseList(struct Cell* head);
```