

COEN 11 - Practice VI

Solutions on Wednesday

1. What does function a print?

```
void
a()
{
    char string[] = "abc";
    char *p = string;
    int x;

    x = b(p);
    printf ("%d\n", x);
    return;
}

int
b(char *p)
{
    if (*p == '\0')
        return 0;
    else
        return ((int)*p + b(p + 1));
}
```

2. Write a recursive function to add all the int numbers in a linked list.
3. Write a recursive function to reverse a string in-place. For example, a string "abc" should become "cba". Do not use a temporary array.
4. Write a recursive function to reverse a linked list. Hint: You may need to pass two pointers into the function.
5. Write a recursive function to calculate the nth number in a series of numbers which is defined as follows:
 - 1st number = 1
 - 2nd number = 2
 - 3rd number = 3
 - nth number = average of the 3 previous numbers