COEN 11 - Practice VII

1. What does the code below print? How many times the function fun is called? Show the return value for each call of function fun.

```
int main (void)
{
        int a = 30;
        int b = 10;
        int c = 10;

        c += fun (a, b);
        printf ("%d, %d, %d\n", a, b, c);
}

int fun (int p, int q)
{
        if (p <= 0)
                return (p);

        p -= 15;
        q -= 5;
        return (fun (p, q) + q);
}
```

2. What does function output?

```
void a ( )
{
    int x = 0;
    char    str[10] = "abc";

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

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

3. 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

4. Write a recursive function to traverse a string copying every other character to a second string.