16.216: ECE Application Programming
Spring 2014

Lecture 15: Key Questions
February 28, 2014

1. **Example:** What does the following program print?

```c
#include <stdio.h>

int f(int a, int b);                // Function prototype

int main() {
    int x = 1;
    int y = 2;
    int result1, result2, result3;

    result1 = f(x, y);
    result2 = f(y, result1);
    result3 = f(result1, result2);

    printf("x = %d, y = %d\n", x, y);
    printf("Result 1: %d\n", result1);
    printf("Result 2: %d\n", result2);
    printf("Result 3: %d\n", result3);

    return 0;
}

int f(int a, int b)          // Function definition
{
    int i;                   // Loop index
    int r = 0;               // Result

    for (i = 0; i < a; i++)
        r += b;

    return r;
}
```

2. **Example:** Write a function to do each of the following:
a. Prints a series of LINE_LENGTH dashes on a single line, where LINE_LENGTH is a predefined constant (using #define)

b. Reads a value from the console input and returns 1 if the value is even, 0 if it's odd

c. Takes four numbers as arguments and returns their average