ESc 101: Fundamentals of Computing

Lecture 3

Jan 6, 2010

OUTLINE

Adding Two Numbers in C

```c
main()
{
    int num1;
    int num2;

    scanf("%d", &num1);
    scanf("%d", &num2);

    num1 = num1 + num2;

    printf("%d", num1);
}
```

TINKERING WITH THE PROGRAM

In this lecture, we play around with the input / output formatting, and other commands of the program.

A More Friendly Program for Adding Two Numbers

```c
main()
{
    int num1;
    int num2;

    printf("Please input a number: ");
    scanf("%d", &num1);
    printf("Please input another number: ");
    scanf("%d", &num2);

    num1 = num1 + num2;

    printf("The result of addition is: ");
    printf("%d", num1);
    printf("\n");
}
```

OUTLINE

Printing Machine Language Code

```
#include <stdio.h>

main()
{
        int i;
        int instruction;

        instruction = (int) getchar();
```

PRINTING MACHINE LANGUAGE CODE

```
for (; instruction != EOF; ) {

    for (i = 0; i < 8; i++) {

        if (instruction < 128)
            printf("0");
        else {
            printf("1");
            instruction = instruction - 128;
        }
        instruction = instruction * 2;
    }
    printf("\n");
    instruction = (int) getchar();
}
}
```