TITLE

Debugging Code

LAB #4

SECTION #1

FULL NAME

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SUBMISSION DATE:

2/14/23

DATE

2/14/23

Problem

The purpose of this lab is to be able read the code and see the problems of the code file and fix it for the correct purpose. This will be helping in learning about the C Compiler messages, become familiar with various types of Compiler errors, learn coding practices to help avoid unintentional errors

Analysis

In this lab, you will learn more about the GCC Compiler's debugging messages. Knowing how to read the debugging messages for errors and warning can be a great skill to know when your program is not functioning correctly.

Design

In this lab, you will learn more about the GCC Compiler's debugging messages. Knowing how to read the debugging messages for errors and warning can be a great skill to know when your program is not functioning correctly. The steps were according to the process followed:

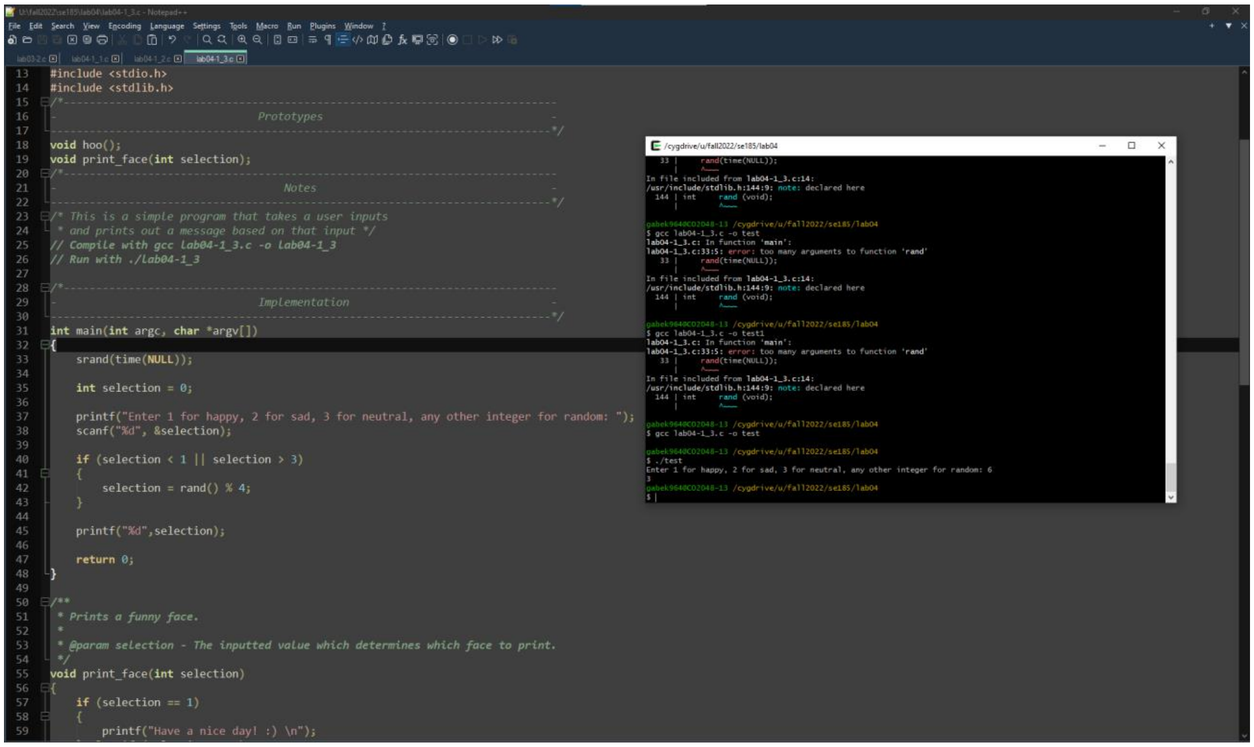
1) Open the files of code
2) Compile the files to locate errors
3) Fix the errors to the correct output

Testing

Knowing how to read the debugging messages for errors and warning can be a great skill to know when your program is not functioning correctly. In this lab we had to identify the problems and fix the solution in order to have the correct output. We have some errors regarding the if-else statements on how to approach it, but we were able to figure and get the right solution

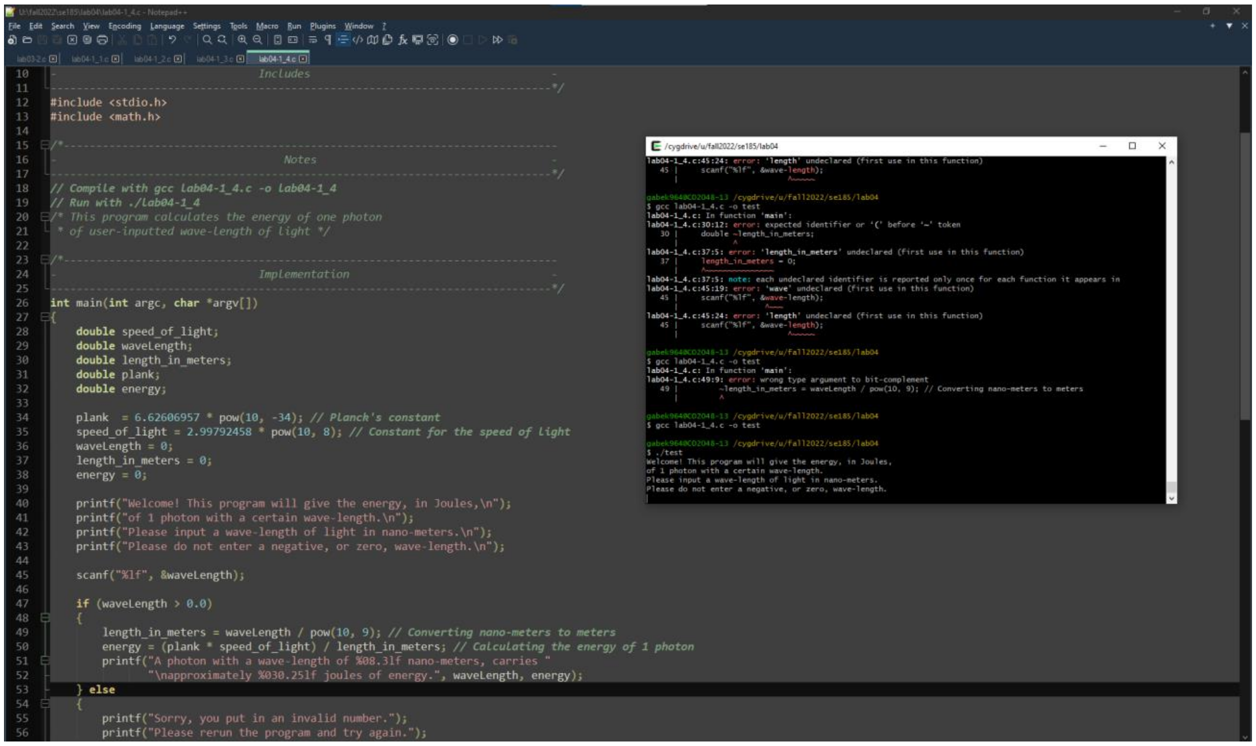
Comments

In doing this lab it will help to identify the problems in C I never knew were possible. It gave me a more of an understanding of C and to be more careful with how I format my code and also w


U:\fall2022\se185\lab04\lab04-1_3.c - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
lab03-2.c
lab04-1_1.c
lab04-1_2.c
lab04-1_3.c

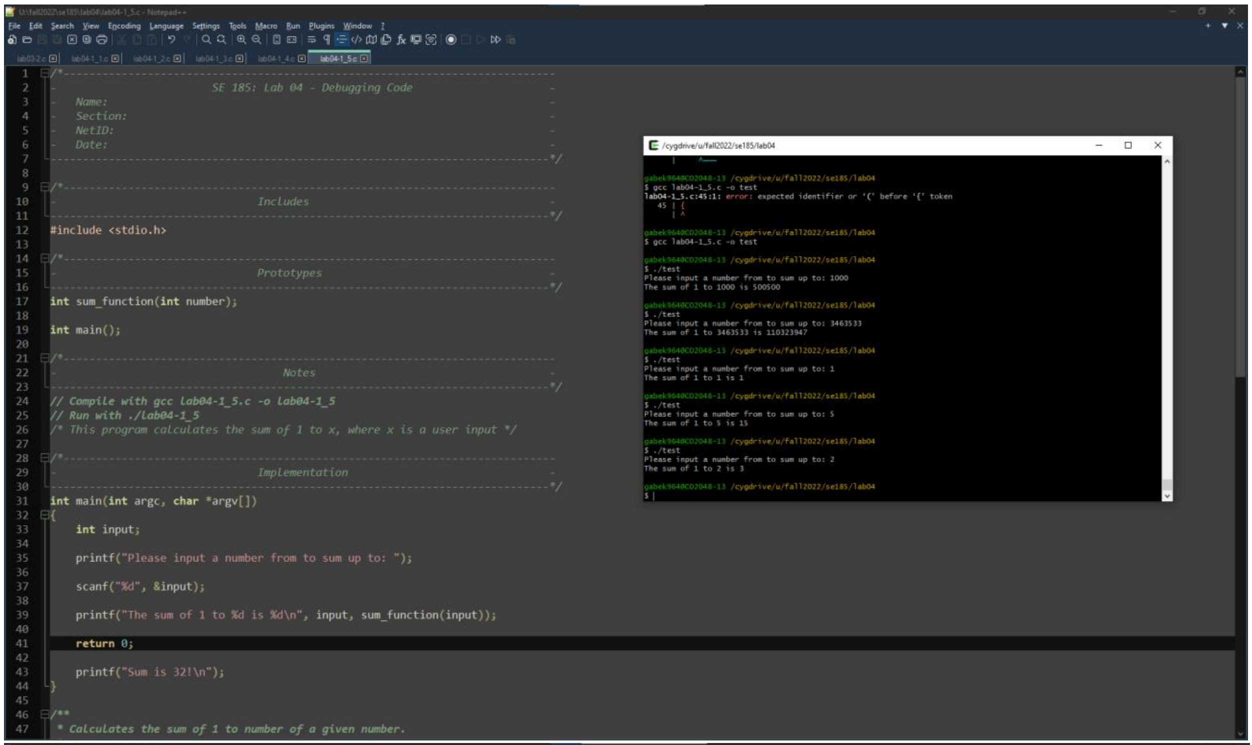
```c
#include <stdio.h>
#include <stdlib.h>
/*-----------------------------------------------------------------------
-                              Prototypes                               -
-----------------------------------------------------------------------*/
void hoo();
void print_face(int selection);
/*-----------------------------------------------------------------------
-                                Notes                                  -
-----------------------------------------------------------------------*/
/* This is a simple program that takes a user inputs
 * and prints out a message based on that input */
// Compile with gcc lab04-1_3.c -o lab04-1_3
// Run with ./lab04-1_3

/*-----------------------------------------------------------------------
-                            Implementation                             -
-----------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    srand(time(NULL));

    int selection = 0;

    printf("Enter 1 for happy, 2 for sad, 3 for neutral, any other integer for random: ");
    scanf("%d", &selection);

    if (selection < 1 || selection > 3)
    {
        selection = rand() % 4;
    }

    printf("%d",selection);

    return 0;
}

/**
 * Prints a funny face.
 *
 * @param selection - The inputted value which determines which face to print.
 */
void print_face(int selection)
{
    if (selection == 1)
    {
        printf("Have a nice day! :) \n");
```

```
   33 |     rand(time(NULL));
      |     ^~~~
In file included from lab04-1_3.c:14:
/usr/include/stdlib.h:144:9: note: declared here
  144 | int     rand (void);
      |         ^~~~

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_3.c -o test
lab04-1_3.c: In function 'main':
lab04-1_3.c:33:5: error: too many arguments to function 'rand'
   33 |     rand(time(NULL));
      |     ^~~~
In file included from lab04-1_3.c:14:
/usr/include/stdlib.h:144:9: note: declared here
  144 | int     rand (void);
      |         ^~~~

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_3.c -o test1
lab04-1_3.c: In function 'main':
lab04-1_3.c:33:5: error: too many arguments to function 'rand'
   33 |     rand(time(NULL));
      |     ^~~~
In file included from lab04-1_3.c:14:
/usr/include/stdlib.h:144:9: note: declared here
  144 | int     rand (void);
      |         ^~~~

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_3.c -o test

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Enter 1 for happy, 2 for sad, 3 for neutral, any other integer for random: 6
3
gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ |
```


U:\fall2022\se185\lab04\lab04-1_4.c - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
lab03-2.c
lab04-1_1.c
lab04-1_2.c
lab04-1_3.c
lab04-1_4.c

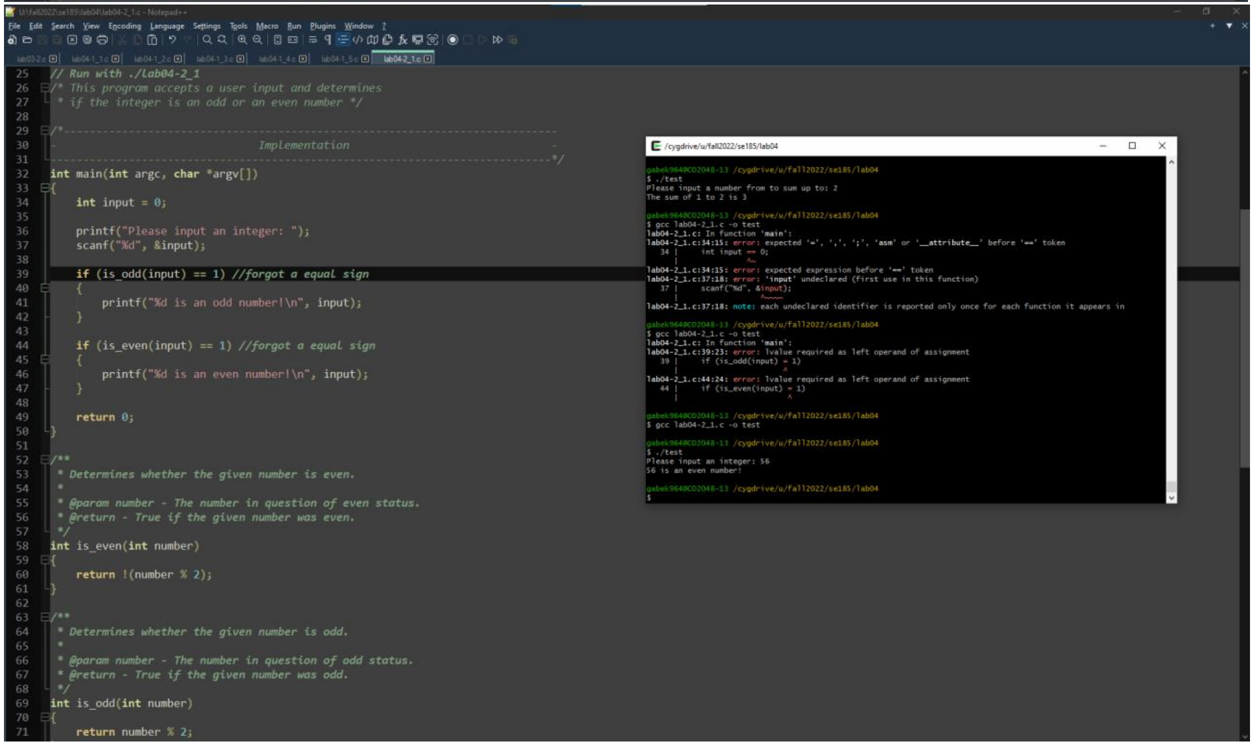
```c
-                               Includes                                -
-----------------------------------------------------------------------*/
#include <stdio.h>
#include <math.h>

/*-----------------------------------------------------------------------
-                                Notes                                  -
-----------------------------------------------------------------------*/
// Compile with gcc lab04-1_4.c -o lab04-1_4
// Run with ./lab04-1_4
/* This program calculates the energy of one photon
 * of user-inputted wave-length of light */

/*-----------------------------------------------------------------------
-                            Implementation                             -
-----------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    double speed_of_light;
    double waveLength;
    double length_in_meters;
    double plank;
    double energy;

    plank  = 6.62606957 * pow(10, -34); // Planck's constant
    speed_of_light = 2.99792458 * pow(10, 8); // Constant for the speed of light
    waveLength = 0;
    length_in_meters = 0;
    energy = 0;

    printf("Welcome! This program will give the energy, in Joules,\n");
    printf("of 1 photon with a certain wave-length.\n");
    printf("Please input a wave-length of light in nano-meters.\n");
    printf("Please do not enter a negative, or zero, wave-length.\n");

    scanf("%lf", &waveLength);

    if (waveLength > 0.0)
    {
        length_in_meters = waveLength / pow(10, 9); // Converting nano-meters to meters
        energy = (plank * speed_of_light) / length_in_meters; // Calculating the energy of 1 photon
        printf("A photon with a wave-length of %08.3lf nano-meters, carries "
               "\napproximately %030.25lf joules of energy.", waveLength, energy);
    } else
    {
        printf("Sorry, you put in an invalid number.");
        printf("Please rerun the program and try again.");
```

```
lab04-1_4.c:45:24: error: 'length' undeclared (first use in this function)
   45 |     scanf("%lf", &wave-length);
      |                        ^~~~~~

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_4.c -o test
lab04-1_4.c: In function 'main':
lab04-1_4.c:30:12: error: expected identifier or '(' before '~' token
   30 |     double ~length_in_meters;
      |            ^
lab04-1_4.c:37:5: error: 'length_in_meters' undeclared (first use in this function)
   37 |     length_in_meters = 0;
      |     ^~~~~~~~~~~~~~~~
lab04-1_4.c:37:5: note: each undeclared identifier is reported only once for each function it appears in
lab04-1_4.c:45:19: error: 'wave' undeclared (first use in this function)
   45 |     scanf("%lf", &wave-length);
      |                   ^~~~
lab04-1_4.c:45:24: error: 'length' undeclared (first use in this function)
   45 |     scanf("%lf", &wave-length);
      |                        ^~~~~~

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_4.c -o test
lab04-1_4.c: In function 'main':
lab04-1_4.c:49:9: error: wrong type argument to bit-complement
   49 |         ~length_in_meters = waveLength / pow(10, 9); // Converting nano-meters to meters
      |         ^

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_4.c -o test

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Welcome! This program will give the energy, in Joules,
of 1 photon with a certain wave-length.
Please input a wave-length of light in nano-meters.
Please do not enter a negative, or zero, wave-length.
|
```


U:\fall2022\se185\lab04\lab04-1_5.c - Notepad++
/cygdrive/u/fall2022/se185/lab04

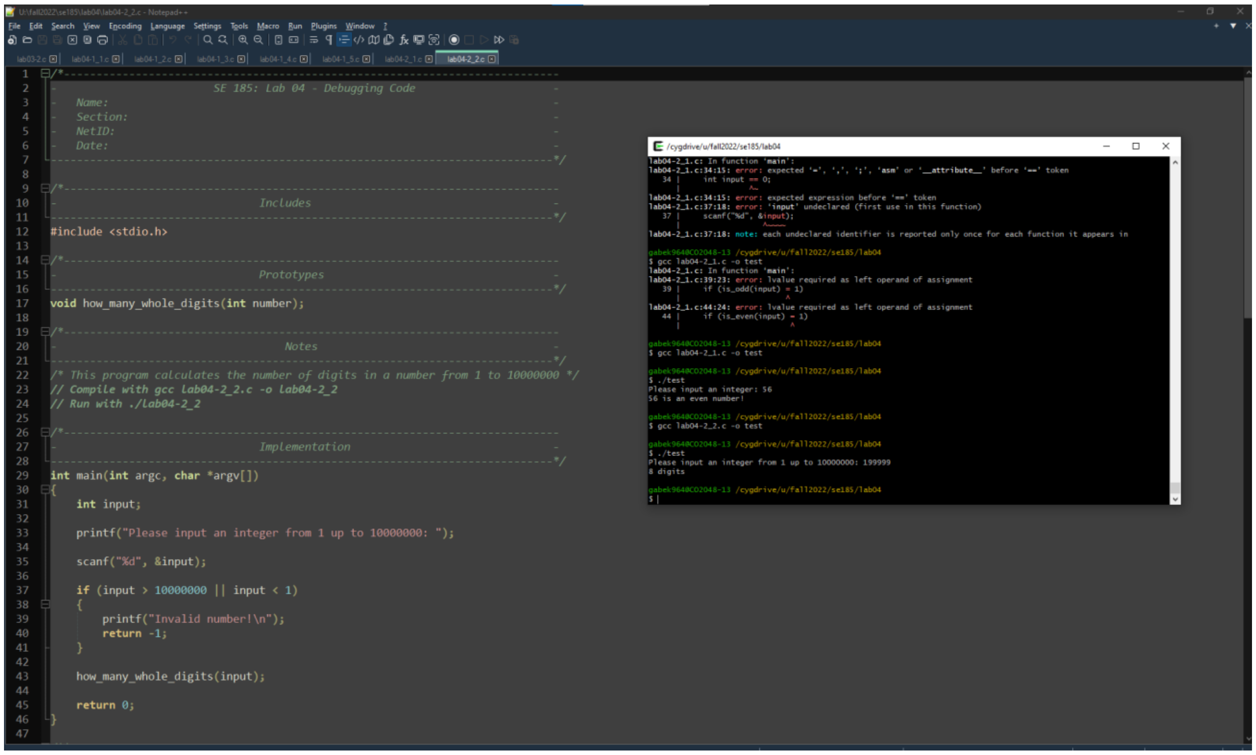
```c
/*----------------------------------------------------------------------------
-                      SE 185: Lab 04 - Debugging Code                      -
-   Name:                                                                    -
-   Section:                                                                 -
-   NetID:                                                                   -
-   Date:                                                                    -
-----------------------------------------------------------------------------*/

/*----------------------------------------------------------------------------
-                                Includes                                    -
-----------------------------------------------------------------------------*/
#include <stdio.h>

/*----------------------------------------------------------------------------
-                                Prototypes                                  -
-----------------------------------------------------------------------------*/
int sum_function(int number);

int main();

/*----------------------------------------------------------------------------
-                                  Notes                                     -
-----------------------------------------------------------------------------*/
// Compile with gcc lab04-1_5.c -o lab04-1_5
// Run with ./lab04-1_5
/* This program calculates the sum of 1 to x, where x is a user input */

/*----------------------------------------------------------------------------
-                              Implementation                                -
-----------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    int input;

    printf("Please input a number from to sum up to: ");

    scanf("%d", &input);

    printf("The sum of 1 to %d is %d\n", input, sum_function(input));

    return 0;

    printf("Sum is 32!\n");
}

/**
 * Calculates the sum of 1 to number of a given number.
```

```
      |     ^~~~~

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_5.c -o test
lab04-1_5.c:45:1: error: expected identifier or '(' before '{' token
   45 | {
      | ^

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_5.c -o test

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input a number from to sum up to: 1000
The sum of 1 to 1000 is 500500

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input a number from to sum up to: 3463533
The sum of 1 to 3463533 is 110323947

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input a number from to sum up to: 1
The sum of 1 to 1 is 1

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input a number from to sum up to: 5
The sum of 1 to 5 is 15

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input a number from to sum up to: 2
The sum of 1 to 2 is 3

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ |
```


U:\fall2022\se185\lab04\lab04-2_1.c - Notepad++
/cygdrive/u/fall2022/se185/lab04

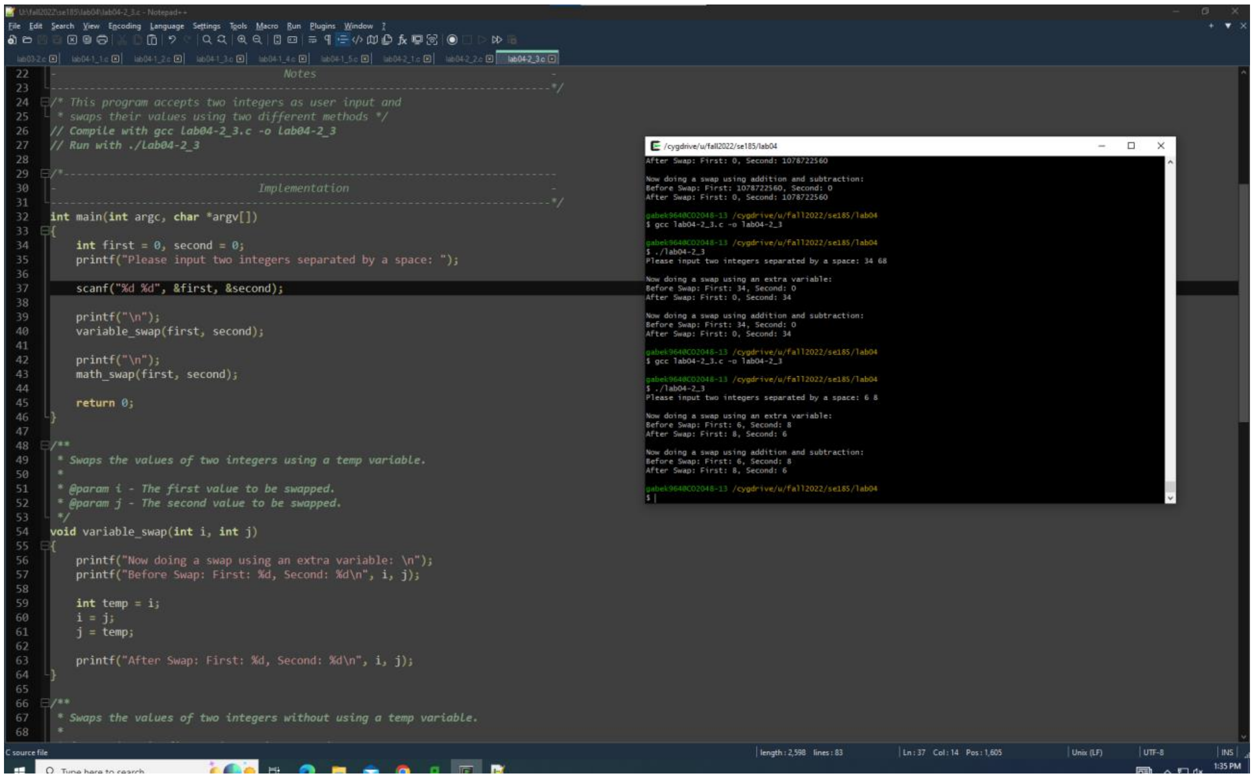
```c
// Run with ./lab04-2_1
/* This program accepts a user input and determines
 * if the integer is an odd or an even number */

/*----------------------------------------------------------------------------
-                              Implementation                                -
-----------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    int input = 0;

    printf("Please input an integer: ");
    scanf("%d", &input);

    if (is_odd(input) == 1) //forgot a equal sign
    {
        printf("%d is an odd number!\n", input);
    }

    if (is_even(input) == 1) //forgot a equal sign
    {
        printf("%d is an even number!\n", input);
    }

    return 0;
}

/**
 * Determines whether the given number is even.
 *
 * @param number - The number in question of even status.
 * @return - True if the given number was even.
 */
int is_even(int number)
{
    return !(number % 2);
}

/**
 * Determines whether the given number is odd.
 *
 * @param number - The number in question of odd status.
 * @return - True if the given number was odd.
 */
int is_odd(int number)
{
    return number % 2;
```

```
gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input a number from to sum up to: 2
The sum of 1 to 2 is 3

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_1.c -o test
lab04-2_1.c: In function 'main':
lab04-2_1.c:34:15: error: expected '=', ',', ';', 'asm' or '__attribute__' before '==' token
   34 |     int input == 0;
      |               ^~
lab04-2_1.c:34:15: error: expected expression before '==' token
lab04-2_1.c:37:18: error: 'input' undeclared (first use in this function)
   37 |     scanf("%d", &input);
      |                  ^~~~~
lab04-2_1.c:37:18: note: each undeclared identifier is reported only once for each function it appears in

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_1.c -o test
lab04-2_1.c: In function 'main':
lab04-2_1.c:39:23: error: lvalue required as left operand of assignment
   39 |     if (is_odd(input) = 1)
      |                       ^
lab04-2_1.c:44:24: error: lvalue required as left operand of assignment
   44 |     if (is_even(input) = 1)
      |                        ^

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_1.c -o test

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input an integer: 56
56 is an even number!

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$
```



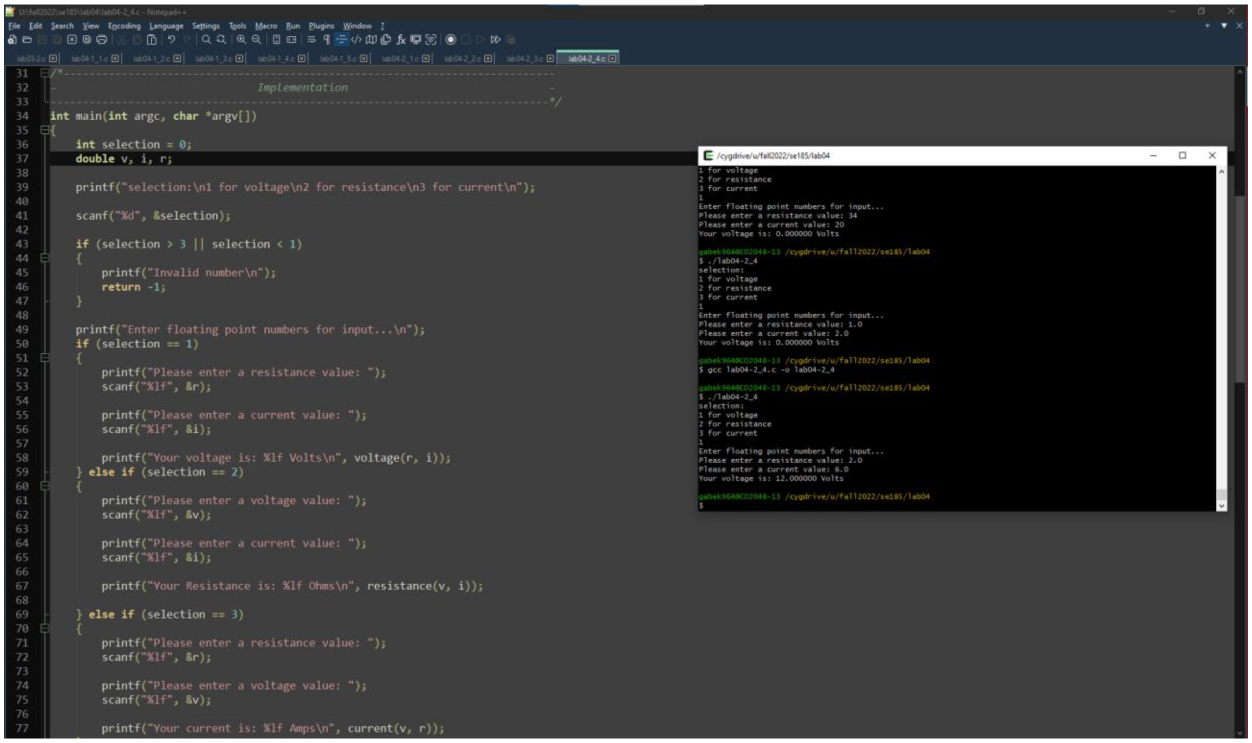
```c
/*------------------------------------------------------------------------
-                  SE 185: Lab 04 - Debugging Code                       -
-   Name:                                                                -
-   Section:                                                             -
-   NetID:                                                               -
-   Date:                                                                -
------------------------------------------------------------------------*/

/*------------------------------------------------------------------------
-                              Includes                                  -
------------------------------------------------------------------------*/
#include <stdio.h>

/*------------------------------------------------------------------------
-                              Prototypes                                -
------------------------------------------------------------------------*/
void how_many_whole_digits(int number);

/*------------------------------------------------------------------------
-                                 Notes                                  -
------------------------------------------------------------------------*/
/* This program calculates the number of digits in a number from 1 to 10000000 */
// Compile with gcc lab04-2_2.c -o lab04-2_2
// Run with ./lab04-2_2

/*------------------------------------------------------------------------
-                              Implementation                            -
------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    int input;

    printf("Please input an integer from 1 up to 10000000: ");

    scanf("%d", &input);

    if (input > 10000000 || input < 1)
    {
        printf("Invalid number!\n");
        return -1;
    }

    how_many_whole_digits(input);

    return 0;
}
```

```
lab04-2_1.c: In function 'main':
lab04-2_1.c:34:15: error: expected '=', ',', ';', 'asm' or '__attribute__' before '==' token
   34 |     int input == 0;
      |               ^~
lab04-2_1.c:34:15: error: expected expression before '==' token
lab04-2_1.c:37:18: error: 'input' undeclared (first use in this function)
   37 |     scanf("%d", &input);
      |                  ^~~~~
lab04-2_1.c:37:18: note: each undeclared identifier is reported only once for each function it appears in

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_1.c -o test
lab04-2_1.c: In function 'main':
lab04-2_1.c:39:23: error: lvalue required as left operand of assignment
   39 |     if (is_odd(input) = 1)
      |                       ^
lab04-2_1.c:44:24: error: lvalue required as left operand of assignment
   44 |     if (is_even(input) = 1)
      |                        ^

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_1.c -o test

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input an integer: 56
56 is an even number!

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_2.c -o test

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Please input an integer from 1 up to 10000000: 199999
8 digits

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$
```



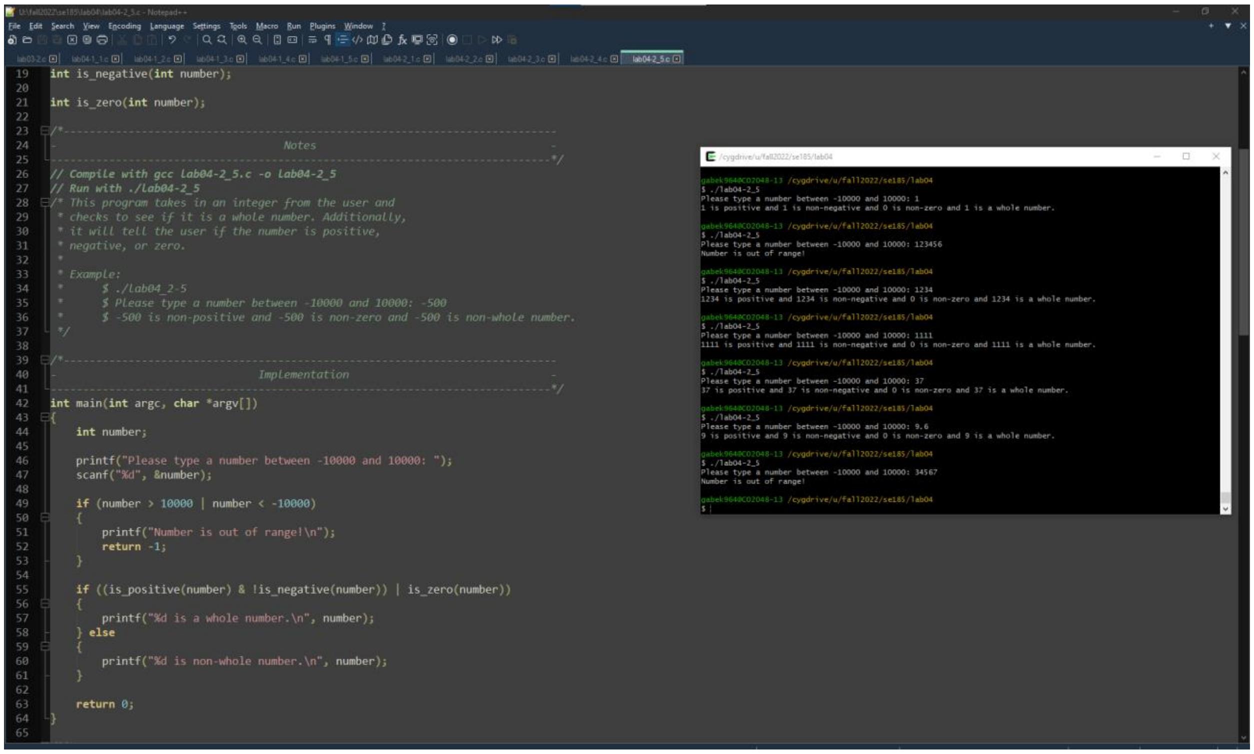
```c
-                                 Notes                                  -
------------------------------------------------------------------------*/
/* This program accepts two integers as user input and
 * swaps their values using two different methods */
// Compile with gcc lab04-2_3.c -o lab04-2_3
// Run with ./lab04-2_3

/*------------------------------------------------------------------------
-                              Implementation                            -
------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    int first = 0, second = 0;
    printf("Please input two integers separated by a space: ");

    scanf("%d %d", &first, &second);

    printf("\n");
    variable_swap(first, second);

    printf("\n");
    math_swap(first, second);

    return 0;
}

/**
 * Swaps the values of two integers using a temp variable.
 *
 * @param i - The first value to be swapped.
 * @param j - The second value to be swapped.
 */
void variable_swap(int i, int j)
{
    printf("Now doing a swap using an extra variable: \n");
    printf("Before Swap: First: %d, Second: %d\n", i, j);

    int temp = i;
    i = j;
    j = temp;

    printf("After Swap: First: %d, Second: %d\n", i, j);
}

/**
 * Swaps the values of two integers without using a temp variable.
 *
```

```
After Swap: First: 0, Second: 1078722560

Now doing a swap using addition and subtraction:
Before Swap: First: 1078722560, Second: 0
After Swap: First: 0, Second: 1078722560

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_3.c -o lab04-2_3

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_3
Please input two integers separated by a space: 34 68

Now doing a swap using an extra variable:
Before Swap: First: 34, Second: 0
After Swap: First: 0, Second: 34

Now doing a swap using addition and subtraction:
Before Swap: First: 34, Second: 0
After Swap: First: 0, Second: 34

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_3.c -o lab04-2_3

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_3
Please input two integers separated by a space: 6 8

Now doing a swap using an extra variable:
Before Swap: First: 6, Second: 8
After Swap: First: 8, Second: 6

Now doing a swap using addition and subtraction:
Before Swap: First: 6, Second: 8
After Swap: First: 8, Second: 6

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$
```



```c
/*-----------------------------------------------------------------------------
-                               Implementation                               -
-----------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    int selection = 0;
    double v, i, r;

    printf("selection:\n1 for voltage\n2 for resistance\n3 for current\n");

    scanf("%d", &selection);

    if (selection > 3 || selection < 1)
    {
        printf("Invalid number\n");
        return -1;
    }

    printf("Enter floating point numbers for input...\n");
    if (selection == 1)
    {
        printf("Please enter a resistance value: ");
        scanf("%lf", &r);

        printf("Please enter a current value: ");
        scanf("%lf", &i);

        printf("Your voltage is: %lf Volts\n", voltage(r, i));
    } else if (selection == 2)
    {
        printf("Please enter a voltage value: ");
        scanf("%lf", &v);

        printf("Please enter a current value: ");
        scanf("%lf", &i);

        printf("Your Resistance is: %lf Ohms\n", resistance(v, i));

    } else if (selection == 3)
    {
        printf("Please enter a resistance value: ");
        scanf("%lf", &r);

        printf("Please enter a voltage value: ");
        scanf("%lf", &v);

        printf("Your current is: %lf Amps\n", current(v, r));
```

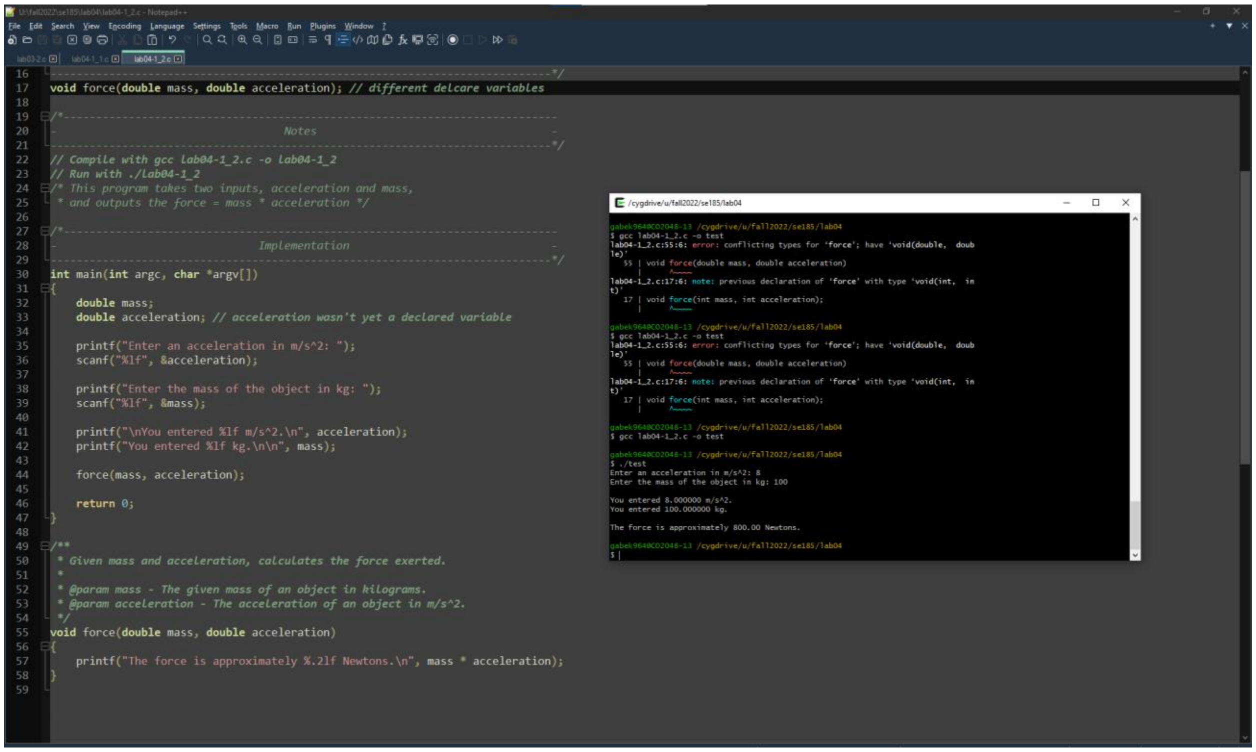
```
1 for voltage
2 for resistance
3 for current
1
Enter floating point numbers for input...
Please enter a resistance value: 34
Please enter a current value: 20
Your voltage is: 0.000000 Volts

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_4
selection:
1 for voltage
2 for resistance
3 for current
1
Enter floating point numbers for input...
Please enter a resistance value: 1.0
Please enter a current value: 2.0
Your voltage is: 0.000000 Volts

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-2_4.c -o lab04-2_4

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_4
selection:
1 for voltage
2 for resistance
3 for current
1
Enter floating point numbers for input...
Please enter a resistance value: 2.0
Please enter a current value: 6.0
Your voltage is: 12.000000 Volts

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$
```



```c
int is_negative(int number);

int is_zero(int number);

/*-----------------------------------------------------------------------------
-                                    Notes                                   -
-----------------------------------------------------------------------------*/
// Compile with gcc lab04-2_5.c -o lab04-2_5
// Run with ./lab04-2_5
/* This program takes in an integer from the user and
 * checks to see if it is a whole number. Additionally,
 * it will tell the user if the number is positive,
 * negative, or zero.
 *
 * Example:
 *      $ ./lab04_2-5
 *      $ Please type a number between -10000 and 10000: -500
 *      $ -500 is non-positive and -500 is non-zero and -500 is non-whole number.
 */

/*-----------------------------------------------------------------------------
-                               Implementation                               -
-----------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    int number;

    printf("Please type a number between -10000 and 10000: ");
    scanf("%d", &number);

    if (number > 10000 | number < -10000)
    {
        printf("Number is out of range!\n");
        return -1;
    }

    if ((is_positive(number) & !is_negative(number)) | is_zero(number))
    {
        printf("%d is a whole number.\n", number);
    } else
    {
        printf("%d is non-whole number.\n", number);
    }

    return 0;
}
```

```
gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_5
Please type a number between -10000 and 10000: 1
1 is positive and 1 is non-negative and 0 is non-zero and 1 is a whole number.

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_5
Please type a number between -10000 and 10000: 123456
Number is out of range!

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_5
Please type a number between -10000 and 10000: 1234
1234 is positive and 1234 is non-negative and 0 is non-zero and 1234 is a whole number.

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_5
Please type a number between -10000 and 10000: 1111
1111 is positive and 1111 is non-negative and 0 is non-zero and 1111 is a whole number.

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_5
Please type a number between -10000 and 10000: 37
37 is positive and 37 is non-negative and 0 is non-zero and 37 is a whole number.

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_5
Please type a number between -10000 and 10000: 9.6
9 is positive and 9 is non-negative and 0 is non-zero and 9 is a whole number.

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$ ./lab04-2_5
Please type a number between -10000 and 10000: 34567
Number is out of range!

gabek964@C02048-13 /cygdrive/u/fall2022/se185/lab04
$
```

Screen Shots

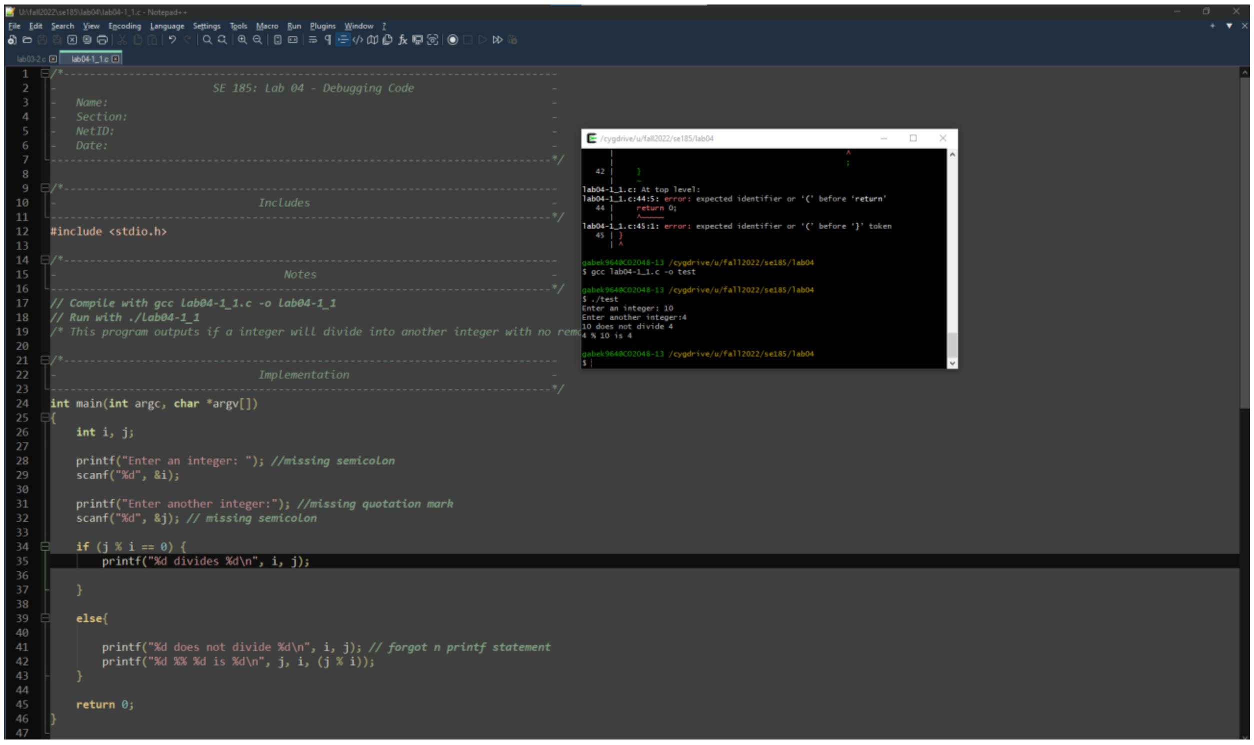


U:\fall2022\se185\lab04\lab04-1_2.c - Notepad++

```c
--------------------------------------------------------------------------*/
void force(double mass, double acceleration); // different delcare variables

/*-------------------------------------------------------------------------
-                                  Notes                                  -
--------------------------------------------------------------------------*/
// Compile with gcc lab04-1_2.c -o lab04-1_2
// Run with ./lab04-1_2
/* This program takes two inputs, acceleration and mass,
 * and outputs the force = mass * acceleration */

/*-------------------------------------------------------------------------
-                              Implementation                             -
--------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    double mass;
    double acceleration; // acceleration wasn't yet a declared variable

    printf("Enter an acceleration in m/s^2: ");
    scanf("%lf", &acceleration);

    printf("Enter the mass of the object in kg: ");
    scanf("%lf", &mass);

    printf("\nYou entered %lf m/s^2.\n", acceleration);
    printf("You entered %lf kg.\n\n", mass);

    force(mass, acceleration);

    return 0;
}

/**
 * Given mass and acceleration, calculates the force exerted.
 *
 * @param mass - The given mass of an object in kilograms.
 * @param acceleration - The acceleration of an object in m/s^2.
 */
void force(double mass, double acceleration)
{
    printf("The force is approximately %.2lf Newtons.\n", mass * acceleration);
}
```

/cygdrive/u/fall2022/se185/lab04

```
gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_2.c -o test
lab04-1_2.c:55:6: error: conflicting types for 'force'; have 'void(double,  doub
le)'
   55 | void force(double mass, double acceleration)
      |      ^~~~~
lab04-1_2.c:17:6: note: previous declaration of 'force' with type 'void(int,  in
t)'
   17 | void force(int mass, int acceleration);
      |      ^~~~~

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_2.c -o test
lab04-1_2.c:55:6: error: conflicting types for 'force'; have 'void(double,  doub
le)'
   55 | void force(double mass, double acceleration)
      |      ^~~~~
lab04-1_2.c:17:6: note: previous declaration of 'force' with type 'void(int,  in
t)'
   17 | void force(int mass, int acceleration);
      |      ^~~~~

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_2.c -o test

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Enter an acceleration in m/s^2: 8
Enter the mass of the object in kg: 100

You entered 8.000000 m/s^2.
You entered 100.000000 kg.

The force is approximately 800.00 Newtons.

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ |
```



U:\fall2022\se185\lab04\lab04-1_1.c - Notepad++

```c
/*-------------------------------------------------------------------------
-                     SE 185: Lab 04 - Debugging Code                     -
-   Name:                                                                 -
-   Section:                                                              -
-   NetID:                                                                -
-   Date:                                                                 -
--------------------------------------------------------------------------*/

/*-------------------------------------------------------------------------
-                                 Includes                                -
--------------------------------------------------------------------------*/
#include <stdio.h>

/*-------------------------------------------------------------------------
-                                  Notes                                  -
--------------------------------------------------------------------------*/
// Compile with gcc lab04-1_1.c -o lab04-1_1
// Run with ./lab04-1_1
/* This program outputs if a integer will divide into another integer with no remc

/*-------------------------------------------------------------------------
-                              Implementation                             -
--------------------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    int i, j;

    printf("Enter an integer: "); //missing semicolon
    scanf("%d", &i);

    printf("Enter another integer:"); //missing quotation mark
    scanf("%d", &j); // missing semicolon

    if (j % i == 0) {
        printf("%d divides %d\n", i, j);

    }

    else{

        printf("%d does not divide %d\n", i, j); // forgot n printf statement
        printf("%d %% %d is %d\n", j, i, (j % i));
    }

    return 0;
}

```

/cygdrive/u/fall2022/se185/lab04

```
      |                                                          ^
      |                                                          ;
   42 |     }
      |     ~
lab04-1_1.c: At top level:
lab04-1_1.c:44:5: error: expected identifier or '(' before 'return'
   44 |     return 0;
      |     ^~~~~~
lab04-1_1.c:45:1: error: expected identifier or '(' before '}' token
   45 | }
      | ^

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ gcc lab04-1_1.c -o test

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ ./test
Enter an integer: 10
Enter another integer:4
10 does not divide 4
4 % 10 is 4

gabek964@CO2048-13 /cygdrive/u/fall2022/se185/lab04
$ |
```