TITLE

Lab 2 Report

LAB #2

SECTION #1

FULL NAME:

Gabriel Kiveu

SUBMISSION DATE:

1/31/23

DATE

1/31/23

Problem

The purpose of this lab is to debug and output the correct results requested for the lab and take a screenshot. This lab will allow the user to become familiar with writing C programs and also solve problems with involving errors

Analysis

The problems states to debug each code file and to output the correct stated in the lab. The problems consist of files code having errors and not being able to compile, in order to fix this the user needs to reads the line code in order to fix errors and have the correct output.

Design

The problem was to debug

● Become familiar with writing simple C programs

● Solve problems involving simple arithmetic in C

● Work with C integer and floating-point math
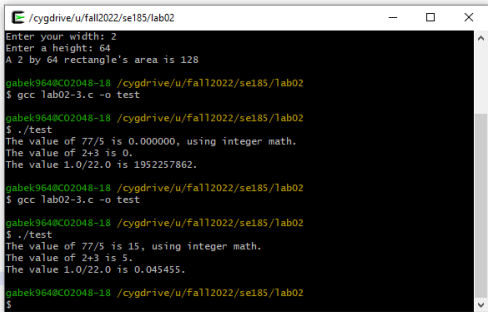
● Introduce basic of C programming

Testing

After fixing the errors in the code, it would need to run in order to see if does the correct output, then if correct to screenshot a record of the work with code and compiler together. However, in some of the files of code had trouble outputting the correct solution, had to go over what was wrong in that line. We found the problem to be the scanf statement being called to the wrong variable, all it needed was to reword the statement and then it was able to output the correct solution

Comments

The lab gave more of an understanding on how to do pay attention to my code to keep it organized and readable for other viewers
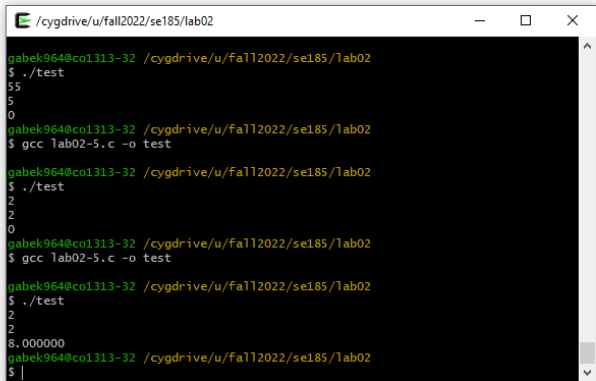
Screen Shots

`lab02-3.c`

```c
/*-------------------------------------------------------------
-           SE 185: Lab 02 - Solving Simple Problems in C      -
-   Name: Gabriel Kiveu                                        -
-   Section:7                                                  -
-   NetID:  936458540                                          -
-   Date:   9/8/22                                             -
-------------------------------------------------------------*/

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

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

    integer_result = 77 / 5;
    printf("The value of 77/5 is %d, using integer math.\n", integer_result);

    integer_result = 2 + 3;
    printf("The value of 2+3 is %d.\n", integer_result);

    decimal_result = 1.0 / 22.0;
    printf("The value 1.0/22.0 is %lf.\n", decimal_result);

    return 0;
}
```

Terminal:
```
Enter your width: 2
Enter a height: 64
A 2 by 64 rectangle's area is 128

gabek964@CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ gcc lab02-3.c -o test

gabek964@CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ ./test
The value of 77/5 is 0.000000, using integer math.
The value of 2+3 is 0.
The value 1.0/22.0 is 1952257862.

gabek964@CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ gcc lab02-3.c -o test

gabek964@CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ ./test
The value of 77/5 is 15, using integer math.
The value of 2+3 is 5.
The value 1.0/22.0 is 0.045455.

gabek964@CO2048-18 /cygdrive/u/fall2022/se185/lab02
$
```

`lab02-4.c` `lab02-1.c` `lab02-5.c`

```c
-                      Includes                               -
-------------------------------------------------------------*/
#include <stdio.h>
#include <math.h>   // Google this header file to learn more! :)

/*-------------------------------------------------------------
-                   Implementation                            -
-------------------------------------------------------------*/
int main(int argc, char *argv[])
{
    double a, b, c;
    double filler;

    /* Put your code after this line */

scanf("%lf", &a);
scanf("%lf", &b);
c= pow(a,2)+ pow(b,2);

//printf(pow(a,2)pow(b,2));
printf("%lf",c);
    return 0;
}
```

Terminal:
```
gabek964@co1313-32 /cygdrive/u/fall2022/se185/lab02
$ ./test
55
5
0
gabek964@co1313-32 /cygdrive/u/fall2022/se185/lab02
$ gcc lab02-5.c -o test

gabek964@co1313-32 /cygdrive/u/fall2022/se185/lab02
$ ./test
2
2
0
gabek964@co1313-32 /cygdrive/u/fall2022/se185/lab02
$ gcc lab02-5.c -o test

gabek964@co1313-32 /cygdrive/u/fall2022/se185/lab02
$ ./test
2
2
8.000000
gabek964@co1313-32 /cygdrive/u/fall2022/se185/lab02
$
```

Top Notepad++ window (lab02-2_2.c):

```
/*-----------------------------------------------------------
-              SE 185: Lab 02 - Solving Simple Problems in C      -
-    Name:                                                        -
-    Section:                                                     -
-    NetID:                                                       -
-    Date:                                                        -
-----------------------------------------------------------*/

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

/*-----------------------------------------------------------
-                      Implementation                         -
-----------------------------------------------------------*/
int main(int argc, char *argv[])
{
    /* Put your code after this line */
    int x, y ;
    printf("Enter your width: ");
    scanf("%d", &x);
    printf("Enter a height: ");
    scanf("%d", &y);
    printf("A %d by %d rectangle's area is %d\n", x, y, x*y);



    return 0;
}
```

Top terminal window (/cygdrive/u/fall2022/se185/lab02):

```
gabek9640CO2048-18 ~
$ cd /cygdrive/u/fall2022/se185/lab02

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ gcc lab02-2_2.c -o test

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ ./test
Enter your width: 2
Enter a height: 64
A 2 by 64 rectangle's area is 128

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$
```

Bottom Notepad++ window (lab02-2-1.c):

```
/*-----------------------------------------------------------
-              SE 185: Lab 02 - Solving Simple Problems in C      -
-    Name:                                                        -
-    Section:                                                     -
-    NetID:                                                       -
-    Date:                                                        -
-----------------------------------------------------------*/

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

/*-----------------------------------------------------------
-                      Implementation                         -
-----------------------------------------------------------*/
int main(int argc, char *argv[])
{
    /* Put your code after this line */
    int x, y ;
    printf("Enter your width: ");
    scanf("%d", &x);
    printf("Enter a height: ");
    scanf("%d", &y);
    printf("A %d by %d rectangle's area is %d\n", x, y, x*y);



    return 0;
}
```

Bottom terminal window (/cygdrive/u/fall2022/se185/lab02):

```
gabek9640CO2048-18 ~
$ cd /cygdrive/u/fall2022/se185/lab02

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ gcc lab02-2-1.c -o lab02-2-1test

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ ./test
-bash: ./test: No such file or directory

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ gcc lab02-2-1.c -o test

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$ ./test
Enter your width: 10
Enter a height: 6

gabek9640CO2048-18 /cygdrive/u/fall2022/se185/lab02
$
```