Aravin Suganthan Lab 2 500961591 1/30/2020

PART I

Exercise 3 Errors

b)

```
#include <stdio.h>

inx
main (void)
{
        int a = 3; b = 4, e;
        Double f = 4, c, d;

        d = a + b;
        c = a / (f - b);
        printf (The value of d is %d"\n, d)
        return (0);
}
```

c)

1. Incorrect type name, “inx” instead of int.
2. Since there is a semicolon after declaration of a, b and e are not included in the int variable type .
3. “e” is not declared.
4. Incorrect case of “Double” has to be spelled all lowercase “double”.
7. In printf statement there is no double apostrophe before “The value …”.
8. \n is outside of the double apostrophe.

e) Syntax Error Correction

```
#include <stdio.h>

int
main (void)
{
        int a = 3, b = 4;
        double f = 4, c, d;

        d = a + b;
```

```
        c = a / (f - b);
        printf ("The value of d is %d \n", d);
        return (0);
}
```

f)

The runtime error caused by dividing “c” by zero (f-b = 0).

The logic error is caused because %d is used instead of %lf, since %d is used for int values and d is a double.

g)Syntax, Logic, Runtime error Correction

```
#include <stdio.h>

int
main (void)
{
        int a = 3, b = 4;
        double f = 4, c, d;

        d = a + b;
        printf ("The value of d is %lf \n", d);
        return (0);
}
```

The result should be 7.0000.

Exercise 6

1) “char” is a type of variable, while “Char” could be used as a variable since it is spelled incorrectly.

2) 0 is displayed. Since %d can only hold integer values, since ¾ is not a whole number (0.75) the result is automatically 0.

3) No it is not valid, since 50 is an integer value and %f is only compatible with double values.

4) No, it would not work. In order for a statement to work it needs to have a semicolon denoting the end of the statement..

5) Aside from use in “printf”, %f is used when working with floats and %lf is used when working with doubles.

6) A runtime error will occur, since division by 0 is not allowed in C.

7) 35%15.3 is not valid, since both values have to be integers.

8) Using main() just has the program return to the default of int main(), since it was unspecified. Also using main(void) restricts the function to have no parameters attached to it.

9)By displaying an integer between 0 and 255 with a %c placeholder, the ASCII code of that integer is shown.

10) No, they are not the same. 5/3 is division between two integers, so the value will be an integer without a decimal place.The result would be 1 in this case. 5%3 is the shows the remainder of 5/3, the result would be 2 in this case. 5.0/3 is division between a double and an integer, and the result of that would be a double (1.666667 in this case).

PART II

1. “printf” allows the computer to display information written in the program, “scanf” allows the user to give a direct input for values in the program.
2. Integer values use 4 bytes of memory and cannot contain a decimal, double values use 8 bytes of memory and can contain decimal values.