Lab 1 (part 2) – Simple Programs in C

Due - Friday September 16, 2016 at 11.59pm

1. Find any errors in the following programs:

a.

```
#include (stdio.h)
int main (void) {


printf("Hello World");
double value;
puts (%d", value);
return (0);
}
```

b.

```
main(){
  Printf('We are to learn correct');
  Printf('C language here')
  getch();

}
```

2. Write a program which uses four printf statements to print the patterns shown below:

a.

```
*
**
***
****
```

b.

```
   *
  * *
 * * *
```

3. write the following C program <u>as is</u>:

```
#include <stdio.h>

main ()
{
  int a, b, ;
  double f = 10, c, d;

  d = a + b;
  c = a / (f - b);
  printf (The value of d is %d and value of c is %lf"\n, d, c)

 getch();
}
```

Compile the program and make appropriate corrections. Once the syntax errors have been corrected <u>there are two errors that remains</u> when you try to run it (one is called a runtime error because you are trying to do something illegal, the other is a logic error because you made a small mistake in the program). What are they?

4. Answer the following questions by trying Dev-C++:

1. **What is displayed by printf ("%d", 3/4); ?**
2. **Is printf ("%f", 50); valid?**
3. **If you omit the (;) at the end of a C statement, is it still working?**
4. **What is the difference between %f and %lf?**
5. **What happens when you attempt a division by zero in C?**
6. **Is there a difference between starting your program with main() instead of int main (void)?**
7. **What happens if you try to display an integer between 0 and 255 with a %c placeholder?**

6. Try the following printf statement:

```
printf("%f", 12.1);
```

What do you see on the screen?

7. What do you get now?

```
printf("1234567890\n");
printf("%7.1f", 12.1 + 3.57);
```

Now try this: (the * is the symbol for multiply in C)

```
printf("1234567890123\n");
printf("%6i%6i\n", 2*3, 4*5);
printf("%-6i%6i", 6*6, 20*40); //Note the minus sign in
                               //front of the 6i
```

What does the minus sign do?

Submission Guidelines

1. Show the lab to your instructor
2. Upload a zipped folder containing:
   a. Word files with the answers to the associated questions of both part (1) and part (2) of lab 1
   b. The .c files for all the programming questions