

GNG1106 Homework Problem Set 1

The homework is to be submitted electronically before the due time. The submission must be a PDF file with a companion C source code (.c file) for the programming question. The solution to the programming question must be in the format of LAB REPORT and included in the PDF file (excepted for the C code, which is separately attached).

Question 1 *The following is a block of C code (intentionally written without indentation).*

```
if ((x>y) && (y>0))
x=x+y;
y++;
if (x>10)
y=x*y;
else
y=x+x*x+y;
printf("the values of x and y are respectively %d and %d\n", x, y);
```

What will this block of code print if right before the block int-typed variables x and y take respectively the following pair of values?

1. 5 and 3
2. 7 and 4
3. 5 and -1
4. 11 and 12;

Question 2 *Will the following source code compile and run? If not, explain why, otherwise describe the execution output of the program.*

```
#include <stdio.h>

int main(void)
{
    if (0)
        printf("Good Bye World,");
    else
        printf("Where am I?");
    printf(" if the world ended on December 21, 2012.\n");
    return 0;
}
```

Question 3 Will the following source code compile and run? If not, explain why and fix the problem(s), otherwise describe how the program will execute.

```
#include <stdio.h>
int main()
{
    printf("3/4 = %f\n", 3/4);
    printf("3.0/4=%f\n", 3.0/4);
    printf("1+2/3+0.4=%f\n", 1+2/3+0.4);
    return 0;
}
```

Question 4 (Programming) Google “university of ottawa grading system”, you will find (most likely via the first suggested link) a grade conversion table that the University uses to convert between letter grades (from A+, A, ... down to F), numerical grades (from 10 down to 0), and percentage grades (from 100 down to 0). Based on the information provided in the table, write a program that prompts the user to enter a percentage grade and then prints the corresponding letter grade.