**Lab 4: Variables (continued), logical operators and loop- while.**

**Task 1:** Write a program which adds two big positive integers and produces a result which is negative! Explain what happens!

**Task 2:** Lab 3.3.9.1 Type conversions: part 1

Tips:

1. After converting float into int, check the converted value by using printf function.
2. Conversion example: double pi = 3.141592;

int three = (int) pi;

**Task 3:** Lab 3.3.9.2 Type conversions: part

**Task 4:** Lab 3.5.7.1 Logical expressions

**Tips:** Remember the following logical operator, how to use them.

left && right

left || right

! operand

Example input: 2012

Example output: 2012 is a leap year

1. #include <stdio.h>
2. int main()
3. {
4. int year;
5. printf("Enter a year: ");
6. scanf("%d",&year);
7. if(year%4 == 0)
8. {
9. if( year%100 == 0)
10. {
11. // year is divisible by 400, hence the year is a leap year
12. if ( year%400 == 0)
13. printf("%d is a leap year.", year);
14. else
15. printf("%d is not a leap year.", year);
16. }
17. else
18. printf("%d is a leap year.", year );
19. }
20. else
21. printf("%d is not a leap year.", year);
23. return 0;
24. }

**Task 5:** Lab 3.4.13.1 Loops: while

**Tips:** run following simple code to understand how to use while. If you know how to use it, just pass it and do Lab 3.4.13.1.

#include <stdio.h>

int main()

{

int x=10;

while( x > 5 )

{

printf("%d\n", x);

--x;

}

return 0;

}

**Task 6:** Please rewrite above program (Task 5 Lab 3.4.13.1) using do-while

**Homework**

**Task 7:** Lab 3.4.15.1 Loops: do - while