Lab 2-2

Data Structure

Lab 2-2

1. Sign in a new GitLab server
2. Do Lab 2-4

Evaluation criteria

Category	Evaluation	
2-4	100	
Total	100	

Use GCC 4.8 version or 5.4 version.
No score will be given if the gcc version is different.

Lab2

- You should finish the first problem (Lab 2-4) during the lab session and submit it to the git. You can leave for home after confirm it with the TA.
- Folder name：Lab2

Lab 2-4. ADT

Input 2 integers as argument input.

execute 5 functions.

1. IsZero
2. Equal
3. Successor
4. Add
5. Subtract

```
ds2018@ds2018-VirtualBox:~/Desktop/DS_lab/ADT_w3$ ./p3_1 14 2147483647
Is 14 zero? False
Is 2147483647 zero? False
Does 14 equal 2147483647? False
14's next number is 15
2147483647's next number is 2147483647
14 + 2147483647 = 2147438647
14 - 2147483647 = 0
```

Lab 2-4. ADT

1. IsZero; if x is zero return True, if not return false
2. Equal; If x is equal to y, return True. If not, return False.
3. Successor; If x+1 is smaller than INT_MAX, return x+1. If not, return x.
4. Add; If x+y is smaller than INT_MAX, return x+y. If not, return INT_MAX.
5. Subtract; If x is larger than y, return x-y. If not, return 0.

Lab 2-4. ADT

- program name：p2_4.c
- data structure：integer
- input：2 integers separated by space.
- output：result of 5 functions
- condition：2147438647 is integer's max number. It can not be increased.

Lab 2-4. ADT

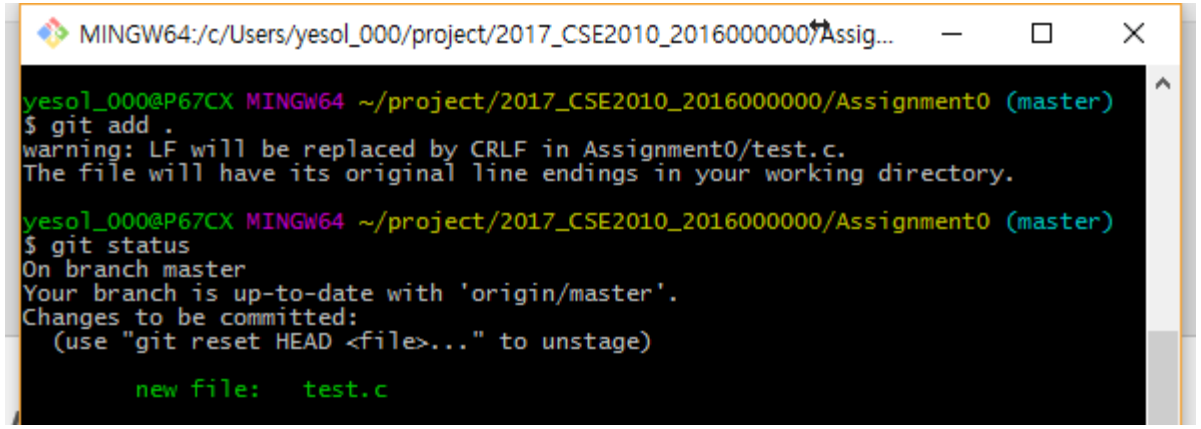
```c
#include<stdio.h>
#include<stdbool.h>
#include<stdlib.h>

#define INT_MAX 2147438647

int Zero();
bool IsZero(int);
bool Equal(int, int);
int Successor(int);
int Add(int, int);
int Subtract(int, int);

int main(int argc, char** args)
{
        int x = atoi(args[1]);
        int y = atoi(args[2]);

        printf("Is %d zero? %s\n",x,IsZero(x) ? "True": "False");
        printf("Is %d zero? %s\n",y,IsZero(y) ? "True": "False");
        printf("Does %d equal %d? %s\n",x,y,Equal(x,y) ? "True": "False");
        printf("%d's next number is %d\n",x,Successor(x));
        printf("%d's next number is %d\n",y,Successor(y));
        printf("%d + %d = %d\n", x, y, Add(x,y));
        printf("%d - %d = %d\n", x, y, Subtract(x,y));

        return 0;
}
```

Git Usage

Add all files in the directory to git

```
$ git add .
```

```
$ git status
```

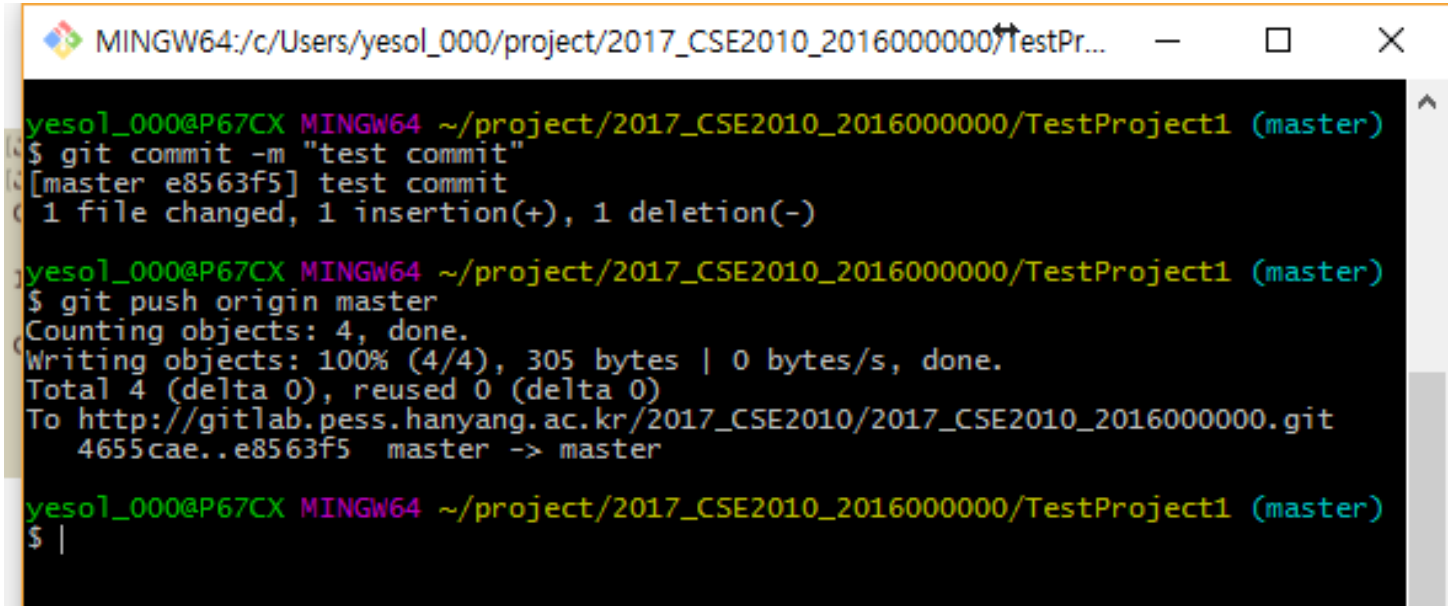


Git Usage

Commit file (Save to local repository 지역 저장소에 저장)

```
$ git commit –m "[commit log message]"
```

```
$ git push origin master
```



※ Commit log message should be write in detail

로그 메시지는 최대한 자세히 작성할 것.

ex) This is a program that prints a message "hello world"