Lab3: recursion and Array test

1) Lab3-1: FIBONACCI (recursion test) : (3점)

```
Fibo( n ) {
    If n=0, return 0
    Else if n = 1, return 1
    Else return (fibo (n-1) + fibo(n-2))
}
```

- Condition: 1) Get any number from keyboard 2) Write the result

  Ex) Enter any number: 8

  fibinacci(8) = fibiancci(7) + fibinacci(6) = 21

2) Lab3-2: Sparse Matrix Transpose (7 점)

- **Read 'Matrix A' from datafile (filename: lab3.dat) and store into array**
- **Transpose 'Matrix A' into 'Matrix B' and store into array.**
- **Printout 'Matrix B' from the array**

(Matrix A)

row	col	value
6	6	8
0	0	15
0	3	22
0	5	-15
1	1	11
1	2	3
2	3	-6
4	0	91
5	2	28

(Matrix B)

row	col	value
6	6	8
0	0	15
0	4	91
1	1	11
2	1	3
2	5	28
3	0	22
3	2	-6
5	0	-15

- **Algorithm (lecture note)**

```
if (valueS > 0)    { /*if not 0 */
   currentb = 0;
   for (i =0; i = colS; i++) /* transpose from matrix A    */
      for (j = 0; j <valueS; j++)
            if (SMarray[j].col ==i {
               b.SMarray[currentb].row = i;
               b.SMarray[currentb].col = SMarray[j].row;
               b.SMarray[currentb].value=SMarray[i].value;
               currentb++;
          }
      }
 return b;
```