Seminar Objectives

Generating test cases based on white box testing.

Topics

- **Control Flow Graph**
- **Coverage criteria: statements, conditions/decisions, paths, loops**

Assignment 1 - 10 minutes - Discussion

Topics

- Control flow graph. Cyclometric complexity metric
- Coverage criteria: statement, condition/decision, paths, loops

Assignment 2 – 80-90 minutes – Test cases based on source code (CFG, coverage)

Based on White-Box Testing develop test cases for the following subalgorithms:

```
1 public boolean isPrime(int n) throws ValueException{

2     boolean b = true;
3     if(n<0){
4           throw new ValueException("data not valid");
      }
5     if(n<2){
6           b=false;
      }
      else{
7           int i=2;
8           while (i< (n/2)){
9                 if ((n % i) == 0){
10                      b=false;
                  }
                  else
11                      b=true;
12                i++;
            }
      }
13    return b;
14 }
  public void SolveLongestSequence() throws ValueException{
    int posI=-1, lengthI=0, i=0;
    int posF=-1, lengthF=0;
    while(i<this.l.size()){
          if(isPrime((int)this.l.get(i))==true){
                if(posI==-1){
                      posI=i;
                      lengthI=1;
                }
                else
                      lengthI++;
          }
          else{
                if(lengthI>lengthF){
                      lengthF=lengthI;
                      posF = posI;
                }
          }
          i++;
    }
    this.start =posF;
    this.length=lengthF;
  }
}
```