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# Assignment On

Software Metrics

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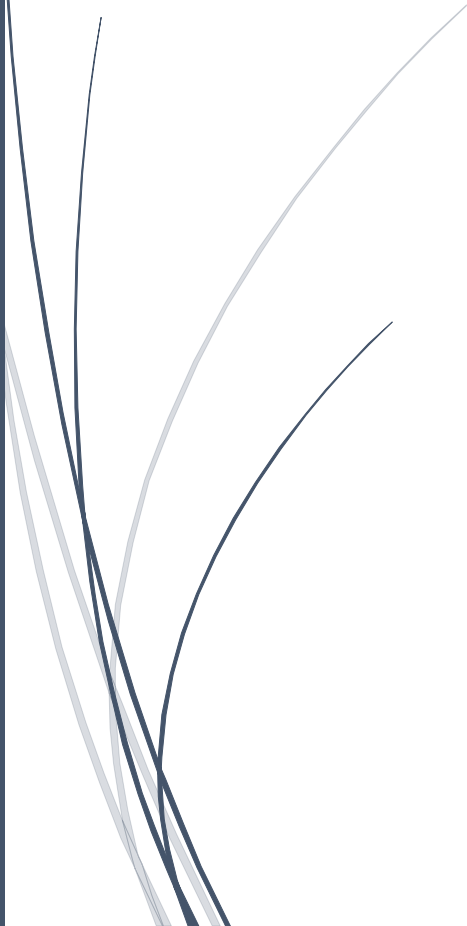
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## **Project:** IIT NSTU APP

### **Code Size:**

Here,

NCLOC = non-commented line of code

CLOC = Commented line of code

n1 = Number of unique operators

n2 = Number of unique operands

N1 = Total occurrences of operators

N2 = Total occurrences of operands

### ***Techniques***

- **Total size**
  - $LOC = NCLOC + CLOC = 5793 + 790 = 6583$
- **Density of comment**
  - $DoC = CLOC / LOC = 790 / 6583 = 0.12 * 100 = 12\%$
- **Halstead Approach**
  - Length of Program  $N = N1 + N2 = 533 + 389 = 922$
  - Vocabulary of program  $\mu = n1 + n2 = 21 + 101 = 122$
  - Volume of Program  $V = N \times \log_2 \mu = 6390.13$
  - Difficulty:  $D = (n1/2) * (N2/n2) = (21/2) * (389/101) = 40.4$
  - Effort:  $E = DV = 25816$
  - Time required to program:  $T = E/18 = 1434.2$
- **Byte of code**
  - 23.8 MB storage used for program

### **Design Size:**

#### **Packages:**

TYPE	MEASURE
Number of sub packages	4
Number of classes	32
Number of interfaces & abstract classes	1

#### **Design patterns:**

TYPE	MEASURE		
Number of different design patterns	1		
Number of interfaces & abstract classes	Strategy Pattern	Classes	6
		interfaces & abstract classes	1
Number of design pattern realizations for each pattern type	Strategy Pattern	1	

#### **Classes, interfaces, or abstract classes:**

TYPE	MEASURE
Number of public methods	122
Number of attributes	145

#### **Methods or operations:**

TYPE	MEASURE
Number of parameters	94
Number of overloaded versions of a method	6

**Weighted methods per class (WMC):** 3.81 (if we consider complexity factor for every method is 1)