

# Software Engineering - Project 1

## Code Metrics Analysis

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The Following Code Metrics were evaluated for the 3 java files of our experiment, namely:

- exp2.java
- exp2\_nand\_out.java
- exp2\_nor\_out.java

After evaluating these, the metrics of the full code base were also evaluated.

### The Results are as follows:

#### 1. exp2.java

Metric Name	Value
Abstractness	0%
Average Block Depth	0.73
Average Cyclomatic Complexity	7.71
Average Lines Of Code Per Method	35.43
Average Number of Constructors Per Type	0.66
Average Number of Fields Per Type	11.33
Average Number of Methods Per Type	4.88
Average Number of Parameters	1.43
Comments Ratio	18%
Efferent Couplings	0
Lines of Code	1,915
Number of Characters	79,980
Number of Comments	345
Number of Constructors	6
Number of Fields	102
Number of Lines	2,593
Number of Methods	44
Number of Packages	1
Number of Semicolons	1,096
Number of Types	9
Weighted Methods	386

## 2. exp2\_nand\_out.java and exp2\_nor\_out.java

Metric Name	Value
Abstractness	0%
Average Block Depth	0.53
Average Cyclomatic Complexity	4.66
Average Lines Of Code Per Method	33.00
Average Number of Constructors Per Type	0.00
Average Number of Fields Per Type	10.00
Average Number of Methods Per Type	3.00
Average Number of Parameters	0.33
Comments Ratio	8.5%
Efferent Couplings	0
Lines of Code	117
Number of Characters	3,761
Number of Comments	10
Number of Constructors	0
Number of Fields	10
Number of Lines	144
Number of Methods	3
Number of Packages	1
Number of Semicolons	88
Number of Types	1
Weighted Methods	14

## Results for the full code base:

Metric Name	Value
Abstractness	0%
Average Block Depth	0.70
Average Cyclomatic Complexity	7.39
Average Depth of Inheritance Hierarchy	4.81
Average Lines Of Code Per Method	35.17
Average Number of Constructors Per Type	0.54
Average Number of Fields Per Type	11.09
Average Number of Methods Per Type	4.54
Average Number of Parameters	1.30
Average Number of Subtypes	0.00
Comments Ratio	16.9%
Difficulty	177.78
Efferent Couplings	9
Effort	16,056,194.33
Lines of Code	2,149
Number of Characters	87,500
Number of Comments	365
Number of Constructors	6
Number of Fields	122
Number of Lines	2,881
Number of Methods	50
Number of Operands	6,251
Number of Operators	3,598
Number of Packages	1
Number of Semicolons	1,272
Number of Types	11
Number of Unique Operands	545
Number of Unique Operators	31
Program Length	9,849
Program Vocabulary	576
Program Volume	90,314.59
Weighted Methods	414