

Quality Metrics of the existing Code Base

1. Lines of code : 980

2. Cyclomatic complexity :

#edges = 18

#nodes = 14

#cycles = 1

Therefore, cyclomatic complexity = $18 - 14 + 1 = 5$

3. Coupling : Monolithic design

4. Cohesion : Low

5. Maintainability Index :

Halstead Complexity Measure :

- $n1$ = the number of distinct operators = 20

- $n2$ = the number of distinct operands = 20

- $N1$ = the total number of operators = 56

- $N2$ = the total number of operands = 56

- Program length: $N = N1 + N2 = 112$

- Program vocabulary: $n = n1 + n2 = 40$

- Volume: $V = N \times \log_2 n = 593.6$

- Difficulty : $D = \frac{n1}{2} \times \frac{N2}{n2} = 28$
- Effort: $= D \times V = 16620.8$

V = Halstead Volume

G = Cyclomatic Complexity

LOC = count of source Lines Of Code (SLOC)

CM = percent of lines of Comment (optional)

$$MI = 171 - 5.2 * \ln(V) - 0.23 * (G) - 16.2 * \ln(LOC) = 25.114$$

6. Check if page load time is within acceptable range : Web page loads in moderate time. Could not test the experiment loading time due to bugs in the code.

7. Check page load on slow connections : Web page loads in moderate time. Could not test the experiment loading time due to bugs in the code.

8. Check response time for any action under light, normal, moderate and heavy load conditions : Web page responds in moderate time. Could not test the experiment loading time due to bugs in the code.