

Complexity Analysis Report.

FRONT END

The complexity analysis of the project was done using the package plato.
(<https://github.com/es-analysis/plato>) .

The following metrics were measured.

- Maintainability
- SLOC
- Estimated errors in implementation
- Lint Errors

Routes:

<https://github.com/PraveenaVP/DigitalWallet/blob/master/complexity/routes/index.html>

app.js :

<https://github.com/PraveenaVP/DigitalWallet/tree/master/complexity/app>

Further analysis of the files were done via , <http://jshint.com/>

Sl No	File Name	Metrics
1	display.js	There are 10 functions in this file. Function with the largest signature take 3arguments, while the median is 1. Largest function has 5 statements in it, while the median is 3. The most complex function has a cyclomatic complexity value of 2 while the median is 1.
2	display.ejs	There are 3 functions in this file. Function with the largest signature take 0arguments, while the median is 0. Largest function has 7 statements in it, while the median is 1. The most complex function has a cyclomatic complexity value of 1 while the median is 1.
3	add.js	There are 6 functions in this file. Function with the largest signature take 3arguments, while the median is 1.5. Largest function has 13 statements in it, while the median is 4. The most complex function has a cyclomatic complexity value of 3 while the

		median is 2.
4	add.ejs	<p>There are 6 functions in this file.</p> <p>Function with the largest signature take 1arguments, while the median is 0.</p> <p>Largest function has 19 statements in it, while the median is 6.</p> <p>The most complex function has a cyclomatic complexity value of 9 while the median is 4.5.</p>
5	Index.js	<p>There is only one function in this file.</p> <p>It takes 3 arguments.</p> <p>This function contains only one statement.</p> <p>Cyclomatic complexity number for this function is 1.</p>
6	Index.ejs	N/A
7	App.js	<p>There are 2 functions in this file.</p> <p>Function with the largest signature take 4arguments, while the median is 3.5.</p> <p>Largest function has 4 statements in it, while the median is 2.5.</p> <p>The most complex function has a cyclomatic complexity value of 3 while the median is 2.</p>

DATABASE

Number of tables → 1

Number of columns → 5

Datatype of columns → TEXT,INTEGER

Database encoding → UTF -8

Total size of each row → $8 * 4 + 8 \rightarrow 36$ bytes

Database insertion (no index) → $O(n)$

Database select (no index) → $O(n)$

```
sqlite> EXPLAIN QUERY PLAN SELECT * from CardDetails;
0|0|0|SCAN TABLE CardDetails
```