

Complexity Report

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1. Structural Complexity

$$a) S(i) = f_{out}^2(i) \quad \text{for the user} \\ = 1$$

$$b) S(i) = f_{out}^2 \quad \text{for the catalogue} \\ = 16$$

The total Structural complexity is 17

2. Data Complexity

$$D(i) = \frac{v(i)}{f_{out}(i)+1} \quad \text{is the formula}$$

Where $v(i)$ is the number of input and output variables that are passed to and from the module i .

$$\text{For the user } D(i) = \frac{v(i)}{f_{out}(i)+1} \\ = \frac{4}{3} = 1,4$$

$$\text{For the catalogue } D(i) = \frac{v(i)}{f_{out}(i)+1} \\ = \frac{6}{4+1} = 1,2$$

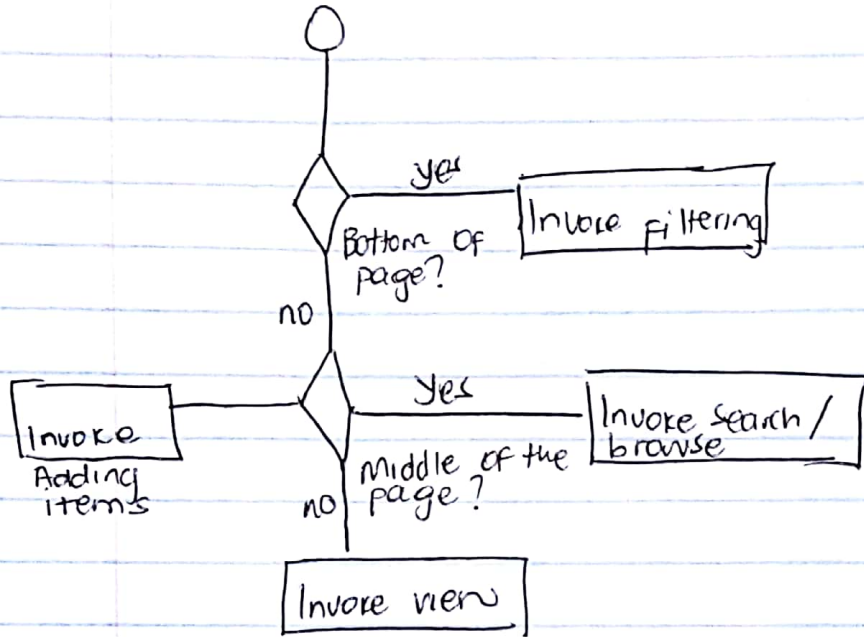
$$\text{Total} = 1,4 + 1,2 = 2,6$$

3. System Complexity

$$C(i) = S(i) + D(i) \\ = 17 + 2,6 = 19,6$$

Cyclomatic Complexity

User clicks with a mouse



$$\text{Edges} = 5$$

$$\text{nodes} = 4$$

$$\text{Predicate nodes} = 5$$

$$\begin{aligned} V(G) &= E - N + 2 \\ &= 5 - 4 + 2 \\ &= 3 \end{aligned}$$

$$\begin{aligned} V(G) &= P + 1 \\ &= 5 + 1 \\ &= 6 \end{aligned}$$

$$\begin{aligned} m &= i_1 + (q_6 \times i_2) + u_1 + (q_7 \times u_2) + g_1 + (q_8 \times g_2) + w + r \\ &= 21, 0 \end{aligned}$$

$$\begin{aligned} \text{Coupling} &= 1/m \\ &= 1/21, 0 \\ &= 0,047 \end{aligned}$$

Cohesion

No. of statements = 21

$$\text{Cohesion Tightness} = 18/21 = 0,857$$

$$\text{MinCoverage} = 13/21 = 0,61$$

$$\text{Coverage} = 1/2 (13/21 + 19/21) = 0,76$$

$$\text{MaxCoverage} = 19/21 = 0,90$$

$$\text{Overlap} = 1/2 (13/15 + 18/21) = 0,84$$