Likelihood of Failure

- Complexity
- Size
- Frequency of Use
- LOF = [(C*3) + (S*2) + F]/3

Impact of Failure

- What would happen if this component failed?
- Examples
  - Nobody would notice
  - The business could not function
  - People could die
Risk Assessment

Impact of Failure

Likelihood of Failure

Low  High

RCS
### Risk Assessment

<table>
<thead>
<tr>
<th>Likelihood of Failure</th>
<th>Impact of Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

- **ACB001**
- **ACB002**
- **ACB003**

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#### Risk Assessment (2)

- **1 - Low Risk**
  - Test changes plus the most critical cases, Moderate code coverage

- **2 - Moderate Risk**
  - Partial regression testing, 100% branch coverage

- **3 - High Risk**
  - High level of regression testing, 100% path coverage

- **4 - Very High Risk**
  - Complete regression testing, 100% path coverage
All it Takes is a Spreadsheet...

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
<tr>
<td><strong>Risk Worksheet</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module or Process</td>
<td>Likelihood of Occurrence</td>
<td>Impact of Occurrence</td>
<td>Risk Score</td>
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<td>ABC001</td>
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<td>4</td>
<td></td>
</tr>
<tr>
<td>Process ABC</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Ways to Apply the Results

- **Influence the development effort**
  - Which system components should be developed first
  - Determining the minimal testable requirements
- **Influence the testing effort**
  - Which components should be tested most rigorously
  - Which types of testing should be applied
  - Determine the level of regression testing
  - Determine the level of test coverage