QA Objectives
What is Quality Assurance

• Quality Assurance (QA) does not equivalent to Testing.
• QA is about assuring quality can be delivered in the software and usually related to process and standards.
• Testing is more related to Quality Control (QC) which is an essential part of QA.
<table>
<thead>
<tr>
<th>What is Quality Assurance Software QA</th>
<th>Software Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software QA involves the entire software development PROCESS - monitoring and improving the process, making sure that any agreed-upon standards and procedures are followed, and ensuring that problems are found and dealt with.</td>
<td>Testing involves operation of a system or application under controlled conditions and evaluating the results.</td>
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</table>

*It is oriented to 'prevention'.  
*It is oriented to 'detection'.  


# Testing Competencies

<table>
<thead>
<tr>
<th>Required Competencies</th>
<th>QA Tester</th>
<th>Trainer</th>
<th>Business Analyst</th>
<th>User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement document verification</td>
<td>Mastery</td>
<td>Mastery</td>
<td>Awareness</td>
<td>Mastery</td>
</tr>
<tr>
<td>Front-end testing</td>
<td>Mastery</td>
<td>Mastery</td>
<td>Mastery</td>
<td>Mastery</td>
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<tr>
<td>Backend/data validation testing</td>
<td>Mastery</td>
<td>Awareness</td>
<td>Awareness</td>
<td>Awareness</td>
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<tr>
<td>Sufficient time available to devote to testing</td>
<td>Mastery</td>
<td>Awareness</td>
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<tr>
<td>Ability to identify all possible positive and negative scenarios</td>
<td>Mastery</td>
<td>Mastery</td>
<td>Mastery</td>
<td>Proficiency</td>
</tr>
<tr>
<td>Familiar with testing techniques</td>
<td>Mastery</td>
<td>Awareness</td>
<td>Awareness</td>
<td>Awareness</td>
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<tr>
<td>Ability to perform multiple cycles of regression testing</td>
<td>Mastery</td>
<td>Awareness</td>
<td>Awareness</td>
<td>Awareness</td>
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<tr>
<td>Ability to understand the business</td>
<td>Proficiency</td>
<td>Mastery</td>
<td>Mastery</td>
<td>Mastery</td>
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<tr>
<td>Ability to test 24 hours a day</td>
<td>Mastery</td>
<td>Awareness</td>
<td>Awareness</td>
<td>Awareness</td>
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<tr>
<td>Ability to automate tests and reduce cycle time</td>
<td>Mastery</td>
<td>Awareness</td>
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</tbody>
</table>
Attributes of QA Process

- Release Processes
  - When do releases occur
  - How often releases occur
  - Service Level Agreements
- Product Introduction Processes
- Backup Processes
- Disaster Recovery / Business Continuance
- Communication Plan for defect resolution
- Problem Escalation Processes
Setup QA Infrastructure

- Test Plan
- Hardware & Software
- Test Case Repository (spreadsheets or any tool)
- Load/Performance Tool (if needed)
- Issue Tracking Plan & Tool (TeamTrack)
- Templates for Test Plan, Test Case, QA Sign-Off document etc.
- QA Metrics Templates
- Reporting
- Communication & Escalation Plan
Types of Testing

- Functional Testing
- Performance/Load Testing
- Security Testing
- Installation Testing
- Data Validation Testing
- Regression Testing
Test Result Management

- Total test Cases Executed
- Total Pass/Fail/Blocked test cases
- % Coverage Overall
- % Coverage product/module wise breakup
- % Failure for the release
- Total issues reported by Severity
- Repeat issues
SDLC & STLC Sync in V model

- Graphical representation of how Software Test Life Cycle (STLC) fits with Software Development Life Cycle (SDLC) without impact on schedule but delivering better quality software.