Software life cycle processes

Purpose

- A new international standard (ISO/IEC 12207:1995(E)) that
  - establishes a common framework for software life cycle processes.
  - uses well-defined terminology
  - is suitable for all sectors in the software industry
Software life cycle processes

Field of application

- Intended for use in a two-party situations
  - parties from different organisations
  - parties from same organisation
  - single party/self imposed tasks

- Not intended for off-the-shelf software products unless incorporated into a deliverable product.

- Written for the
  - acquirer, supplier, developer, operator, maintainer
  - managers, QA managers and end-users
Software life cycle processes

Structure of the international standard

5. Primary Life Cycle Processes

6. Supporting Life Cycle Processes

7. Organisational Life Cycle Processes
Software life cycle processes
Three Grouping

- 5 primary life cycle processes
  - Acquisition, supply, development, operation and maintenance.

- 8 supporting life cycle processes
  - Documentation, configuration management, quality assurance, validation, verification, joint review, audit and problem resolution.

- 4 organisational life cycle processes
  - Management, infrastructure, improvement and training.
Software life cycle processes

Five primary life cycle processes

<table>
<thead>
<tr>
<th>CONTRACT VIEW</th>
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<tbody>
<tr>
<td><strong>5.1 Acquisition process</strong></td>
</tr>
<tr>
<td>Initiation</td>
</tr>
<tr>
<td><strong>5.2 Supply process</strong></td>
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<tr>
<td>Initiation</td>
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</tbody>
</table>
## Software life cycle processes

### Five primary life cycle processes

#### 5.3 Development process

<table>
<thead>
<tr>
<th>Process</th>
<th>System requirements analysis</th>
<th>System architectural design</th>
<th>Software requirements analysis</th>
<th>Software architectural design</th>
<th>Software detailed design</th>
<th>Software coding and testing</th>
<th>System integration</th>
<th>System qualification testing</th>
<th>Software installation</th>
<th>Software acceptance support</th>
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#### 5.5 Maintenance process

<table>
<thead>
<tr>
<th>Process implementation</th>
<th>Problem &amp; modification analysis</th>
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<tbody>
<tr>
<td>Modification implementation</td>
<td>Maintenance review/acceptance</td>
</tr>
<tr>
<td>Migration</td>
<td>Software retirement</td>
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Software life cycle processes

Five primary life cycle processes

OPERATING VIEW

5.4 Operation process

- Process implementation
- Operational testing
- System operation
- User support
Software life cycle processes

Five primary life cycle processes

Start

5.1 Acquisition process

5.2 Supply process

5.3 Development process

5.4 Operation process

5.5 Maintenance process

End