

Chapter 15: Quality Concepts

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- Views
- Software quality
 - ★ ○ An effective software process defined in a manner that creates a useful product that provides measurable value for those who produce it and those who use it
 - An effective software process establishes infrastructure that supports building a high-quality software product
 - Chaos - determines poor quality
 - Structure, analysis, change management, technical reviews - determines high quality
- Quality in use - ISO25010:2017
- Cost of Quality
 - Prevention costs
 - Quality planning
 - Formal technical reviews
 - Test equipment
 - Training
 - Appraisal costs
 - Conducting technical reviews
 - Data collection and metrics evaluation
 - Testing and debugging
 - Internal failure costs
 - Rework
 - Repair
 - Failure mode analysis
 - External failure costs
 - Complaint resolution
 - Product return and replacement
 - Help line support
 - Warranty work
- Impact of Management Decisions
 - Estimation decisions - irrational delivery dates can effect quality
 - Scheduling decisions - failing to find task dependencies when creating the schedule
 - Risk-oriented decisions - reacting rather than building mechanisms to monitor risks
- Achieving Software Quality
 - Understand the problem to be solved
 - Design that conforms to problem requirements
- Project management - plans for quality and change management
 - Use estimation to verify that delivery dates are achievable
 - Understood schedule and no shortcuts
 - Risk planning to avoid crisis'
- ★ • Quality control - series of inspections, reviews, and tests used to ensure conformance to specifications
- ★ • Quality assurance - consists of auditing and reporting to provide management with the proper data