

Component 4: Introduction to Information and Computer Science

Unit 9/Part d: Components and Development of Large Scale Systems

3. Systems Design

- Output and User Interface Design
- Data Design
- System Architecture



Component 4/Unit 9d

Health IT Workforce Curriculum
Version 1.0/Fall 2010

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Output and User Interface Design

- Output design
 - Distribution and audience
 - Implementation methods
 - Control
- User interface design
- Input design
 - Data entry vs data capture
 - Batch vs online input



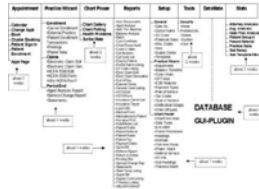
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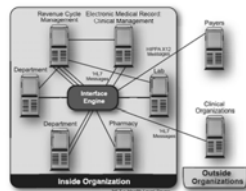
Data Design

- Develop a physical plan for:
 - Data organization
 - Data storage and access
 - Data control



System Architecture

- Translates the logical design of an information system into a physical structure that includes:
 - hardware
 - software
 - network support
 - processing methods
 - security



4. Systems Implementation

- Managing systems implementation
 - Application development
 - Testing
 - Documentation
 - Training
 - Data conversion
 - System changeover
 - Post-implementation evaluation

Testing

- Test Plan
- Test Cases and their contents
- Testing Sequence
- Kinds of Tests



Test Plan

- Testing goals
- Key areas of focus
- Testing deliverables
- How tests will run
- List of items to test
- Roles and responsibilities
- Prerequisites
- Environment
- Assumptions
- What to do when test is successful
- What to do when test fails
- Glossary

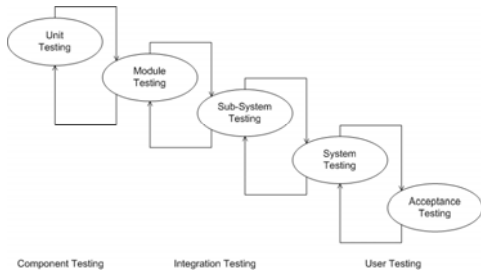
Test Cases

- Test cases are written to:
 - cover all use cases and scenarios
 - validate technical requirements and specifications
 - verify the application/system meets the business and functional requirements specified
 - verify the system meets performance standards

Contents of Test Cases

- Test Case ID
 - Test Case Description:
 - What to test
 - How to test
 - Input Data
 - Expected Result
 - Actual Result
 - Pass? or Fail?
- Additional information may also be captured:
 - Test Suite Name
 - Test Category
 - Tested By
 - Test Date
 - Test Iteration

Testing Sequence



Kinds of Tests

1 of 4

- GUI software
- Usability
- Performance
- Compatibility
- Load and/or Stress