Software Reviews, Walkthroughs, and Inspections

The standard technique to ensure quality in software development

Question

What is the title of the chapter in which the material about software reviews is found?

– A. SQA
– B. Testing
– C. Software Design

Question

What do software reviews do to software?

– A. correct
– B. purify
– C. disinfect
– D. clarify

Review – two definitions

A formal, scheduled activity where a designer presents material about a design and a selected group of peers evaluates the technical aspects of the design.

The inclusive name for reviews, walkthroughs, and inspections

Types of Reviews

– Reviews
  – Requirement (SRR)
  – Design (PDR, CDR)
– Walkthroughs
– Inspections
  – Code
  – Document

Walkthrough

A formal, scheduled activity where a designer presents a design and traces the values of sample data through the design and a selected group of peers evaluates the technical aspects of the design.
Inspection

◆ A formal, scheduled activity where a specialist checks a document for conformity with established standards (often corporate standards)

540-541 REVIEWS

◆ Professionalism
  - be prepared
  - be organized
  - present good image
◆ Materials in advance
◆ TA and Instructor serve as evaluators
◆ Team is graded on quality of effort, professionalism, and following standards
◆ Points will be taken off for not correcting problems
◆ Usually 50 minutes

Procedures for Reviews

◆ The evaluators prepare for the review by studying the prepared documents.
◆ A formal report on the review is often required by management.

Conduct of Reviews

1 schedule review
2 distribute materials
3 prepare
4 present
5 discuss
6 report

Rules for Reviews

- proper constructive attitude
- proper preparation
- proper environment
- no management
- participants should be participants
- producers should determine time
- distribute reports fast
- record all issues in public

Rules for Reviewers

- prepare
- be friendly
- watch comments
- one positive comment, one negative
- raise issues, don't solve them
- avoid style issues
- stick to standards
- stick to technical issues
- make certain that everybody understands
- do not evaluate producers
An Example Presentation 1

Purpose of Reviews
- ensure quality through peer review
- provide management visibility
- encourage preparation

Defect Amplification
- Undetected defect “amplify” during subsequent phases
- Figure 8.2 - 8.4

Peer Review
- the primary function is to use the skill of a group of people to:
  - 1) identify needed improvements
  - 2) certify correctness
  - 3) encourage uniformity
  - 4) enforce subjective rules

Management
- secondary functions include:
  - 1) communication
  - 2) milestone
  - 3) visibility to management

Progress
- additional function (and not the least) is to force preparation of materials and specification (both meanings) of ideas.
Next Tuesday, 9/24/02

- Read about derived classes in C++ book
- Stroustrup, ch 12