Inspections

SOEN384 Tutorial 1

2020 Fall

Quality Control Techniques

- **Software review**: "A process or meeting during which a software product is examined by a project personnel, managers, users, customers, user representatives, or other interested parties for comment or approval".

- **Inspection:** a very formal type of peer review where the reviewers are following a well-defined process to find defects.

Inspection and Review

- The main objective of an Inspection or a Review is to detect defects.
- Inspections and reviews are testing of *software artifacts* without the actual execution of code and is especially suited for :

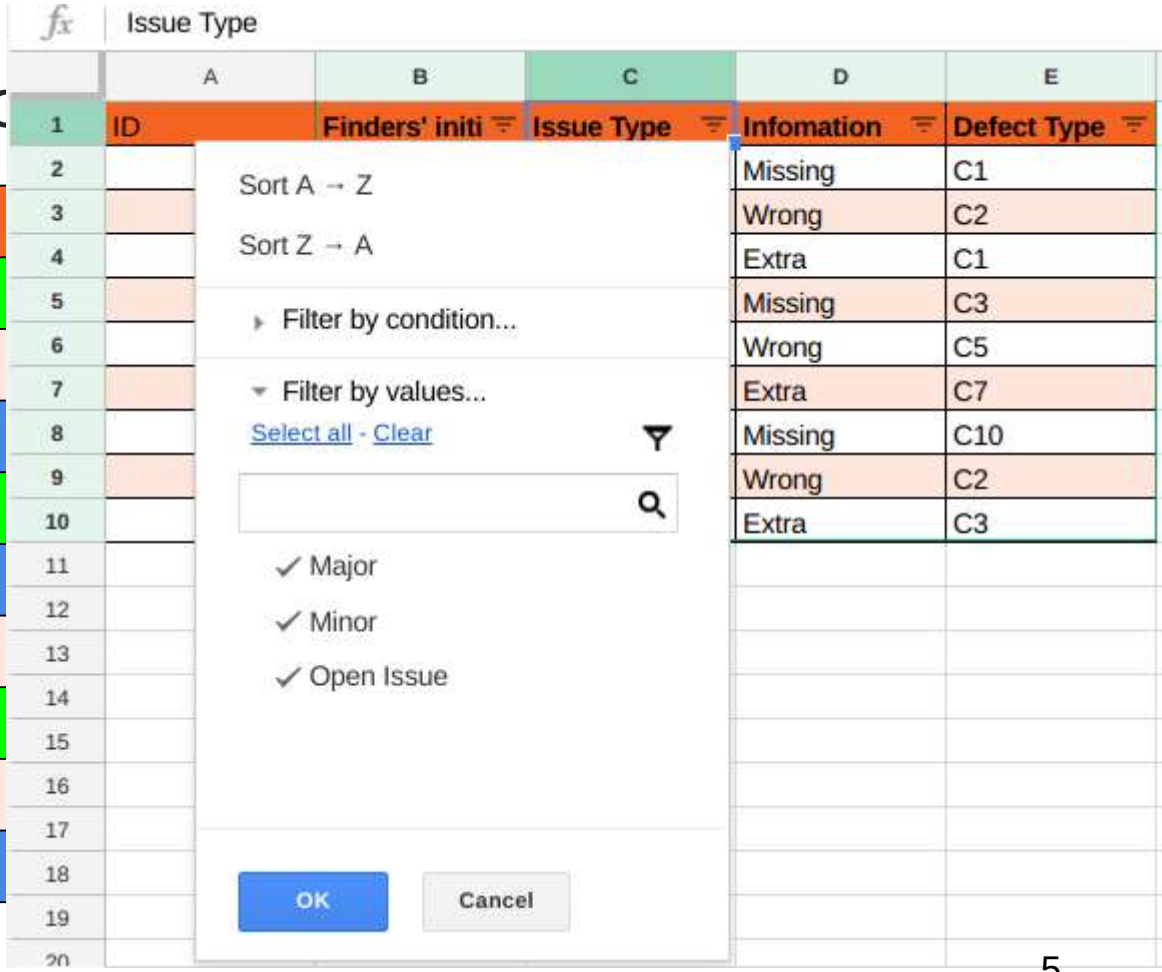
1. Requirements documents (SRS)
2. Design documents
3. Plans and Tests Cases
4. **Code (will be practiced in this tutorial)**

Outline

- How to classify defects
- Defect checklist for code inspections
- Open Issues

How to classify defec

ID	Finders' initials
1	Adams
2	Baker
3	Clark
4	Adams
5	Clark
6	Frank
7	Adams
8	Hills
9	Clark



Classification

- Finders’ initials
- Issue Type
  - Major: Serious, Correct **Now**
  - Minor: Problem, Can be corrected **Later**
  - Open Issue: O1 - O3, Need further work
- Information
  - Missing: Needed information is not provided
  - Wrong: incorrect information is provided
  - Extra: Unnecessary information is provided
- Defect Type
  - C1 - C10

Defect checklist for code inspections

- C1. Functionality
  - Implementation of the design in the code
- C2. Logic
  - Inputs, outputs, loop tests, branch tests, nesting, calls and returns among modules
- C3. Data Usage
  - Declarations, initializations, assignments and uses
- C4. Interfaces
  - Matching of argument lists and other interfaces, return codes
- C5. Clarity
  - Comment blocks, commenting, variable names, indentation, white space

Defect checklist for code inspections

- C6. Maintainability
  - Ease of understanding, traceability to detailed design, coupling and cohesion, change history in the comments header block
- C7. Syntax
  - Use of symbols and punctuation (note: a clean compile should be inspected)
- C8. Files
  - Declarations, opening, closing
- C9. Style
  - Use of comment headers and in - line comments, guidelines for coding style
- C10. Other
  - Defects that are not of the listed defect types

Open Issues

- O1: Questionable changes to the design in the code
- O2: Packaging of the code modules
- O3: Other open issues

The Checklist Can be Customized in different projects

Remarks

● If by any reason you cannot attend the tutorial live session, talk to your TA to find you a teammate for step 2.