**Summary**

***WHAT IS A SOFTWARE REVIEW?***

*>> A process or meeting during which a software product is examined by project personnel, managers, users, customers, user representatives, or other interested parties for comment or approval*



***HOW MANY CATEGORIES OF SOFTWARE REVIEWs?***

*>> Three categories:*

***Software peer reviews***

***Software management reviews***

***Software audit reviews***

***What is software peer reviews?***

*>> evaluates the technical quality of software products*

***What is the purpose of a peer review?***

*>> To provide "a disciplined engineering practice for detecting and correcting defects in software artifacts, and preventing their leakage into field operations" according to the Capability Maturity Model.*

***What is software management reviews?***

*>> A management study into a project's status and allocation of resources*

***What is software audit reviews?***

*>> An externally conducted audit into a project's compliance to specifications, contractual agreements, and other criteria.*

***What is the purpose of a software audit?***

*>> To provide an independent evaluation of conformance of software products and processes to applicable regulations, standards, guidelines, plans, and procedures*

***How many types of review?***

*>>* ***4 Review Types***

* *Informal Reviews*
* *Walkthroughs*
* *Technical Reviews*
* *Inspections*

***Inspection?***

*>> A very formal type of peer reviews where the reviewers are following a well-defined process to find defects.*

***Walkthrough****?*

*>> A form of peer review where the author leads members of the development team and other interested parties through a software product and the participants ask questions and make comments about defects.*

***Technical review?***

*>> A form of peer review in which a team of qualified personnel examines the suitability of the software product for its intended use and identifies discrepancies from specifications and standards.*

***How about IEEE 1028 generic process for formal reviews?***

*>> The sequence of activities is largely based on the software inspection process originally developed at IBM by Michael Fagan.*

*0. [Entry evaluation]*

*1. Management preparation*

*2. Planning the review*

*3. Overview of review procedures*

*4. [Individual] Preparation*

*5. [Group] Examination*

*6. Rework/follow-up*

*7. [Exit evaluation]*

***How about the formal review?***

* *Planning*
* *Individual preparation*
* *Examination/evaluation/recording of results (review meeting)*
* *Rework*
* *Follow-up*

***How about Roles and Responsibilities?***

* *Manager*
* *Moderator*
* *Author*
* *Reviewers*
* *Scribe (or recorder)*

***How many steps of the inspection process?***

* ***Planning:****The inspection is planned by the moderator.*
* ***Overview meeting:****The author describes the background of the work product.*
* ***Preparation:****Each inspector examines the work product to identify possible defects.*
* ***Inspection meeting:****During this meeting the reader reads through the work product, part by part and the inspectors point out the defects for every part.*
* ***Rework:****The author makes changes to the work product according to the action plans from the inspection meeting.*
* ***Follow-up:****The changes by the author are checked to make sure everything is correct.*

***Advantages of reviews***

* *Early defect detection and correction*
* *Development productivity improvements*
* *Reduced development timescales*
* *Reduced testing cost and time*
* *Lifetime cost reductions*
* *Fewer defects and improved communication.*
* *Reviews can find omissions*

*For example, in requirements, which are unlikely to be found in dynamic testing.*

***What is a Pair programming?***

*>> An agile software development technique in which two programmers work together at one workstation. One, the driver, types in code while the other, the observer (or navigator), reviews each line of code as it is typed in. The two programmers switch roles frequently.*