

EXPERIMENT – 08

Aim: Prepare FTR

Objective: Preparing formal technical reviews for project

Theory:

FTR is a formal review performed by a review team. It is performed in any phase of software development for any work product, which may include requirement specification, design document, code and test plan. Each FTR is conducted as a meeting and is considered successful only if it properly to planned, controlled, and attended. The objectives of FTR are:

1. To detect errors in functioning of software and errors occurring due to incorrect logic in software code.
2. To check whether the product being reviewed accomplished user requirements or not.
3. To ensure that a product is developed using established standards.

REVIEW GUIDELINES IN FTR:

To conduct a FTR, there are some review guidelines. These guidelines are established before review meeting begins. The commonly followed review guidelines are as follows:

- **Review the product:** The focus of FTR should be to detect errors in the product instead of pointing out any mistakes (if any) committed by a team member. The aim should be to conduct the review in harmony among all the team members.
- **Set the agenda:** Formal reviews should keep a track of the schedule. The moderator is responsible for maintaining this schedule. For this purpose, he ensures that each review team members is performing the assigned task properly.
- **Keep track of Discussion:** During the review meeting, various issues arise. However, it is possible that each review team member has a

different view on an issue. Such issues should be recorded for further discussion.

- **Advance Preparation:** Review should make an advance preparation for the product to be reviewed. For this purpose, the reviewers should note the issues that can arise during the review meeting. Then it is easy for them to discuss the issues during the review meeting.
- **Indicate problem in the product:** The objective of a review meeting should be only to indicate the problems or errors. In case there are no proper suggestions for the problem, a review meeting should be conducted again.
- **Categorize the error:** The errors detected in the software should be classified according to the different categories:
 - **Critical errors:** Refer to errors that bring the execution of the entire software to a halt. Thus crucial errors need to be fixed before the software is delivered.
 - **Major errors:** Refer to errors that affect the functionality of programs during their execution. Like critical errors, major errors need to be fixed before the software is delivered.
 - **Beside errors:** Refer to errors that do not affect the usability of software.
 - **No errors:** Indicate that there are no errors in the software.
- **Prepare notes:** The recorder who is one of the reviewers should keep a record of the issues in order to set priorities for other reviewers as the information is recorded.
- **Specify the number of people:** There should be a limited number of individuals at the meeting that should be specified before the meeting begin.
- **Develop a checklist:** A checklist should be maintained at the end of the meeting. The checklist helps the reviewer to focus to important issues that are discussed at the meeting. Generally a checklist should be prepared for analysis, design and code documents.

REVIEW MEETING

A review meeting is conducted to review the product in order to validate its quality. Review team members examine the product to identify errors in it. As shown in Fig, a successful review consists of a number of stages.

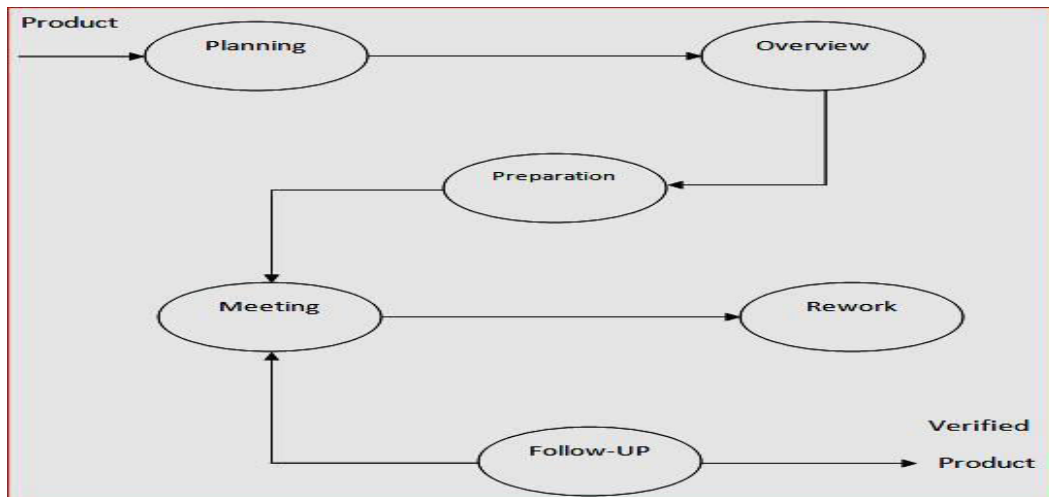


Fig 8.1 Stages of Review Meeting

- 1. Planning:** In this stage the author studies the product that requires a review informs the moderator about it. The moderator verifies the product that is to be examined. The verification is essential to examine whether the product requires a review or not. After verification, the moderator assigns the task to the review team members. The objective of planning is to ensure that the review process is followed in an efficient manner. In addition, it ensures that proper schedule is made to conduct an effective review.
- 2. Overview:** In this stage the product is analyzed in order to detect errors. For this purpose, knowledge of the product is essential. In case reviewers do not have proper knowledge of the product, the author explains the functionality and the techniques used in the product.
- 3. Preparation:** In this stage, each review team members examines the product individually to detect and record problem (such as error and defects) in the product. There are several types of problems that are identified during the preparation stage. Generally the problems considered at this stage are listed below:
 - **Clarity:** User requirement are not understood properly.

- **Completeness:** Details of user requirement are in complete.
- **Consistency:** names of data structures and functions are specified properly.
- **Feasibility:** Constraints such as time, resources and techniques are not specified correctly.

4. Meeting: In this stage, the moderator reviews the agenda and issues related to the product. The problems described in the overview stage are discussed among review team members. Then, the recorder records the problems in a defect list, which is used to detect and correct the errors later by the author. The defect list divided into the following categories:

- **Accept the product:** In this category, author accepts the product without the need for any further verification. This is because there are no such problems that halt the execution of the product.
- **Conditionally Accept the Product:** In this category, the author accepts the product, which requires verification. If there are any problems in the product, the next stage is followed
- **RE-examines the Product:** In this category, the author re-examines the product to understand the problem in it. After rework, the product is sent to the moderator again it verifies that problem are eliminated.

5. Rework: In this stage, the author revises the problem that is identified during review meeting. He determines the problem in the product and their causes with the help of a defect list. Then he resolves the problem in the product and brings it back to the moderator for the follow up stage.

6. Follow-up: In this stage the product is verified after the author has performed rework on it. This is due to the fact that he may have introduced new errors in the product during network. In case there are still errors in the product, a review meeting is conducted again.

While the review is being conducted, the recorder records all the issues raised during the review meeting. After he completes the task, the receiver summarizes the review issues. These issues are recorded in two kinds of document, namely:

- **Review issue list:** This document is concerned with the identification of problems in the product. It also acts as a checklist that transforms the author about the corrections made in the product.
- **Review summary report:** this document focuses on information, such as the phase of software development reviewed, the review team member who reviewed it and conclusions of the review meetings. Generally, a review summary report comprises a single page and is advantageous for future reference by the software development team.

FTR for Attendance Maintenance System.

FTR is a formal review performed by a review team. It is performed in any phase of software development for any work product, which may include requirement specification, design document, code and test plan. Each FTR is conducted as a meeting and is considered successful only if it properly planned, controlled, and attended. The objectives of FTR are:

1. To detect errors in functioning of software and errors occurring due to incorrect logic in software code.
2. To check whether the product being reviewed accomplished user requirements or not.
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REVIEW GUIDELINES IN FTR:

- Review the product
- Set the agenda
- Keep track of Discussion.
- Indicate problem in the product
- Categorize the error
- Prepare notes
- Specify the number of people
- Develop a checklist

REVIEW MEETING:

A review meeting is conducted to review the product in order to validate its quality. Review team members examine the product to identify

errors in it. As shown in Fig, a successful review consists of a number of stages.

Stages of Review Meeting:

- 1. Planning.** The Review team will check whether the work plan specified is properly working or not
- 2. Overview:** In this stage the Attendance maintenance system is analyzed in order to detect errors. For this purpose, knowledge of the product is essential.
- 3. Preparation:** In this stage, each review team members examines the Attendance maintenance system individually to detect and record problem
 - **Completeness:** User requirements for Attendance maintenance are complete are checked here
 - **Clarity:** Attendance maintenance requirements are understood properly
 - **Consistency:** Names of data structures and functions are specified properly.
 - **Feasibility:** Constraints such as time, resources and techniques are specified correctly.
- 4. Meeting:** In this stage, the moderator reviews the agenda and issues related to the Attendance Maintenance system. The problems described in the overview stage are discussed among review team members. Then, the recorder records the problems in a defect list, which is used to detect and correct the errors later by the author. The defect list divided into the following categories:
 - **Accept the product:** In this category, author accepts the product without the need for any further verification. This is because there are no such problems that halt the execution of the product.
 - **Conditionally Accept the Product:** In this category, the author accepts the product, which requires verification. If there are any problems in the product, the next stage is followed
 - **RE-examines the Product:** In this category, the author re-examines the product to understand the problem in it. After

rework, the product is sent to the moderator again it verifies that problem are eliminated.

5. Rework: In this stage, the author revises the problem that is identified during review meeting. He determines the problem in the Attendance maintenance system and their causes with the help of a defect list. Then he resolves the problem in the product and brings it back to the moderator for the follow up stage.

6. Follow-up: In this stage, the Attendance maintenance system is verified after the author has performed rework on it. In case there are still errors in the product, a review meeting is conducted again.