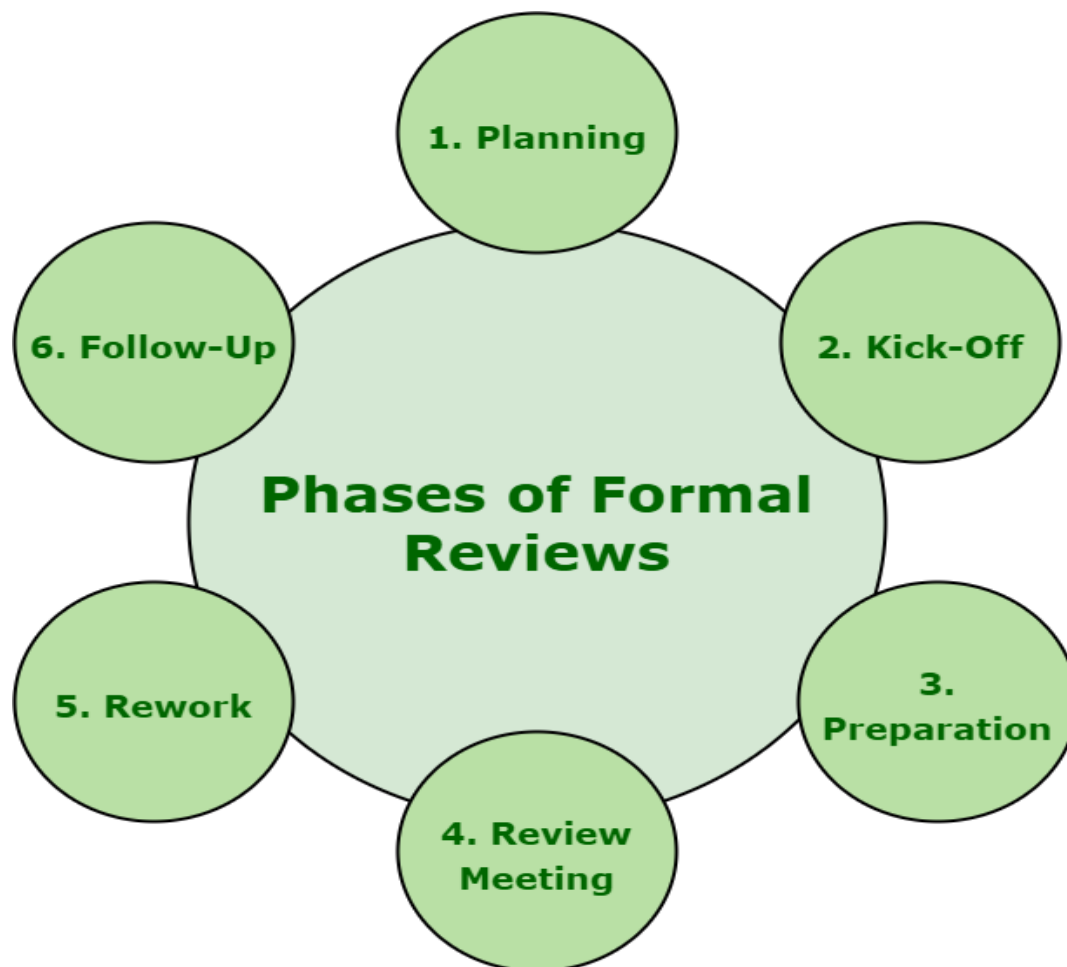


## **TASK-4: REVIEW AND WALKTHROUGH & ERROR DEFECT AND FAILURE**

### **REVIEW:**

Software review is a systematic inspection of software by one or more people working together to find errors or defects. A software review is an essential step to validate the quality and functionality of the product and checks whether it meets the requirements of the clients. Software review is done to verify various documents like requirements, system design, codes, test plans and test cases.

Phases of software review:



## **TYPES OF SOFTWARE REVIEWS:**

They are mainly 3 types of reviews:

- **SOFTWARE PEER REVIEW:**

Peer review is a process of checking the quality and the technical content of the product along with other developers. Peer review is also done by other members of the team.

Types of peer reviews:

1. Code review
2. Pair programming
3. Walk through
4. Technical review
5. Inspection

- **SOFTWARE MANAGEMENT REVIEW:**

In software management review, the work status and decisions about downstream activities are evaluated.

- **SOFTWARE AUDIT REVIEW:**

The Software audit review is done by the people outside of the team. They check the working and give their complaints if any are there. This is mainly done by managerial level people.

## **Advantages of Software Review**

- Defects can be identified at an earlier stage of development (especially in formal review).
- Earlier inspection also reduces the maintenance cost of software.
- It can be used to train technical authors.
- It can be used to remove process inadequacies that encourage defects.

### **WALKTHROUGH:**

Members of the development team are guided by the author and other interested parties and the participants ask questions and make comments about defects.

The walkthrough is a review meeting process, but it is different from the Inspection, as it does not involve any formal process i.e. it is a nonformal process. Basically, the walkthrough [review meeting process] is started by the Author of the code.

In the walkthrough, the code or document is read by the author, and others who are present in the meeting can note down the important points or can write notes on the defects and can give suggestions about them. The walkthrough is an informal way of testing, no formal authority has been involved in this testing.

As there is an informal way of testing involved there is no need for a moderator while performing a walkthrough. We can call a walkthrough an open-ended discussion, it does not focus on the documentation. Defect tracking is one of the challenging tasks in the walkthrough.

## **ERRORS, DEFECT, FAILURE AND BUGS:**

The mistake made by humans is an error and when the required output differs from the obtained output it is called a defect. The error leads to a defect which causes a failure of the system.

### **BUG:**

In software testing, a bug is the informal name of defects, which means that software or application is not working as per the requirement. When we have some coding error, it leads a program to its breakdown, which is known as a bug. The test engineers use the terminology Bug.

If a quality analyst detects a bug, they can reproduce the bug and record it with the help of the bug report template.

### **DEFECT:**

When the application is not working as per the requirement it is known as defects. It is specified as the aberration from the actual and expected result of the application or software. In other words, we can say that the bug announced by the programmer and inside the code is called a defect.

### **ERROR:**

The Problem in code leads to errors, which means that a mistake can occur due to the developer's coding error as the developer misunderstood the requirement or the requirement was not defined correctly. The developers use the term error.

### **FAULT:**

The fault may occur in software because it has not added the code for fault tolerance, making an application act up.

A fault may happen in a program because of the following reasons:

- Lack of resources
- An invalid step
- Inappropriate data definition

### **FAILURE:**

Many defects lead to the software's failure, which means that a loss specifies a fatal issue in software/ application or in its module, which makes the system unresponsive or broken.

In other words, if an end-user detects an issue in the product, that issue is called a failure.

Possibilities are there one defect that might lead to one failure or several failures

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