



**REPORT ON**

# Software Engineering

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# **INTRODUCTION**

In this report we are going to see about the software engineering and how it works on the today's world. It deals with the new software technologies and the process in which the software manipulates the environment. It associates the development of the software products, principles and methods. Software engineering was introduced to address the issues of low-quality software projects. Problems arise when a software generally exceeds timelines, budgets, and reduced levels of quality. It ensures that the application is built consistently, correctly, on time and on budget and within requirements. The demand of software engineering also emerged to cater to the immense rate of change in user requirements and environment on which application is supposed to be working.

## **Evolution of software**

In software engineering, software evolution is referred to as the process of developing, maintaining, and updating software for various reasons. Software changes are inevitable because there are many factors that change during the life cycle of a piece of software.

Some of these factors include:

- Requirement changes
- Environment changes
- Errors or security breaches
- New equipment added or removed, and finally
- Improvements to the system

For many companies, one of their largest investments in their business is for software and software development. Software is considered a very critical asset, and management wants to ensure they employ a team of software engineers who are devoted to ensuring that the software system stays up-to-date with ever evolving changes.

## **Description**

A software product is judged by how easily it can be used by the end-user and the features it offers to the user. An application must score in the following areas -

**Operational:** This tells how good a software works on operations like budget, usability, efficiency, correctness, functionality, dependability, security and safety.

**Transitional:** Transitional is important when an application is shifted from one platform to another. So, portability, reusability and adaptability come in this area.

**Maintenance:** This specifies how good a software works in the changing environment. Modularity, maintainability, flexibility and scalability come in maintenance part.

Software Development Lifecycle or SDLC is a series of stages in software engineering to develop proposed software application, such as:

1. Communication
2. Requirement Gathering
3. Feasibility Study
4. System Analysis
5. Software Design
6. Coding

7. Testing

8. Integration

9. Implementation

10. Operations and maintenance

11. Disposition

## **Conclusion**

In the modern technology each and every thing has been related to software engineering in any of the form. Software engineering plays a major role in the field of software which is associate with the set of procedures or methods that have to be followed in the field of engineering. Software can only result in design faults but not in physical. Software engineering apply the principles and techniques of computer science, engineering and mathematical analysis to the design, development, testing and evaluation of the software and the system that enable computers to perform their applications.

