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**Software Maintenance**

Software maintenance is the process of modifying or updating a software product after delivering it to customer in order to correct any fault and to improve performance along the way. It is a part of software development life cycle (SDLC). There are numerous reasons why software needs maintenance after delivering it to customers, for e.g., to improve the design, correct any faults, improve performance, implement enhancements, interface with other systems, changes in market conditions, any host modifications, organizational changes etc.

Types of software maintenance vary depending on its nature. It could just be a routine maintenance tasks for bugs discovered or it may be a large event in itself. Based on the characteristics, there are four types of software maintenance:

1. Corrective Maintenance: Corrective maintenance may be essential either to rectify some bugs observed while the system is in use or to enhance performance of the system.
2. Adaptive Maintenance: Adaptive maintenance is used when the customers need the product to run on new platforms, on new operating systems, or when they need the product to interface with new hardware and software.
3. Perfective Maintenance: Perfective maintenance is essential to support the new features that the users want or to change different types of functionalities of the system according to the customer demands.
4. Preventive maintenance: Preventive maintenance is used to prevent future problems of the software. It aims to attend problems, which are not significant at this moment but may cause issues in future.

Maintenance activities can be used in iterative manner and can be extended so that customized items and processes can be included. Maintenance activities includes following sequential phases:

* Identification and tracing
* Analysis
* Design
* Implementation
* System testing
* Acceptance testing
* Delivery
* Maintenance management