



Software Engineering

هندسة البرمجيات

جامعة بغداد

كلية التربية للعلوم الصرفة/ابن

الهيثم

قسم علوم الحاسبات

المرحلة الثالثة

م.د. علي يحيى غني



نظري محاضرة الاسبوع الخامس والعشرون

Software Maintenance

Topics covered



- ✧ What is Software Maintenance?
- ✧ Software Maintenance Types.
- ✧ Software Maintenance process model.
- ✧ What are the problems in software maintenance? (Legacy software)?
- ✧ Factors of Software Maintenance.

What is Software Maintenance?



- Software maintenance is becoming an important activity of a large number of software organizations.
- **Software Maintenance:** The process of modifying a software system or component.



Software Maintenance Types



Software Maintenance Types



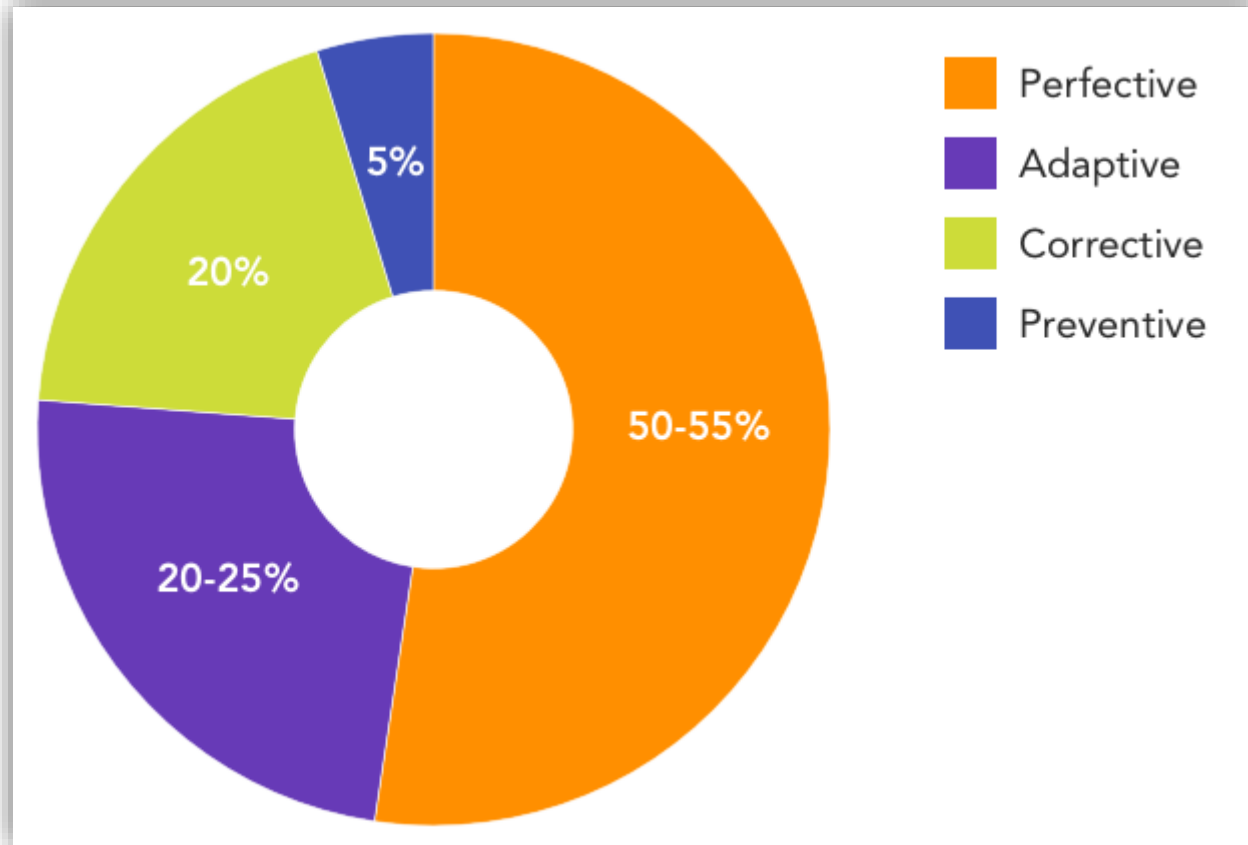
www.educba.com

Software Maintenance Types



- ✧ **Corrective:** is necessary to correct the bugs observed while the system is in use.
- ✧ **Adaptive:** 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 or software.
- ✧ **Perfective:** A software product needs maintenance to support the new features that users want it to support, to change different functionalities of the system according to customers, or to enhance the performance of the system.
- ✧ **Preventive:** Data restructuring, code restructuring

Software Maintenance Types



Software Maintenance process model



- ✧ Gather Change Requirements
- ✧ Analyze Change Requirements
- ✧ Devise Code Change Strategies
- ✧ Apply Code Change Strategies to the Old Code

Update Documents

Integrate and Test

Software Maintenance process model

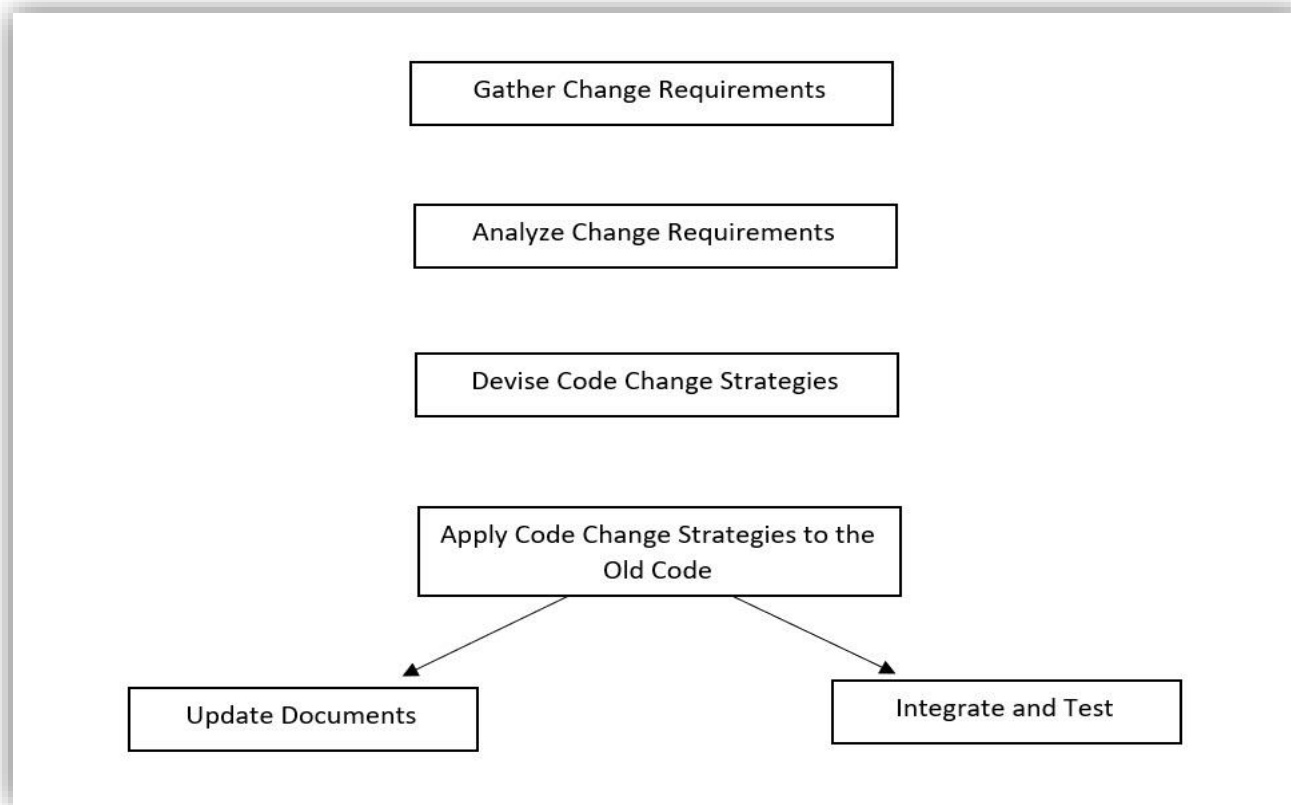


Figure 50 Maintenance process model

What are the problems in software maintenance?

(Legacy software)



- ✧ **Legacy software:** Any software system that is hard to maintain. The typical problems associated with legacy systems are poor documentation, unstructured and lack of personnel knowledgeable in product. Many of the legacy systems were developed long time back. But, it is possible that a recently developed system having poor design and documentation can considered to be a legacy system.



Thanks