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**1. What is software engineering? Explain what it includes.**

Software engineering is an application of engineering to the development of software in a systematic method.

Software engineering involves a numbers of fields that cover the process of software engineering:

* *Analysis*: gather software requirements from clients, analyze and document them to develop the system requirements specification.
* *Design:* the process to transform clients’ requirement into some suitable form, which help programmer in software coding and implementation.
* *Construction :* from the design developers start constructing the software
* *Verification:* the process of checking that a software system meets specifications and that it fulfills its intended purpose. It may also be referred to as software quality control.
* *Management of technical entities:* related to crew management with tasks, logistics, service and maintenance.

**2. How engineering process is divided into different phases? What activities are involved in each phase?**

Engineering Process is divided into 3 phases: definition phase, development phase and maintenance phase.

* *Definition phase:* the requirements are identified in this phase, which information need to be processed, what functions are desired, related to analysis and design steps.
* *Development phase:* the software is being construct in this phase, software engineering need to define structure of data, functions and interfaces that needed, translate the design into programming language.
* *Maintenance phase:* reapplies the steps of Definition phase and Development phase in a existing software, change with error correction and clients’ requirements. As software is used, the customer/user will recognize additional functions that will provide benefit. Perfective maintenance extends the software beyond its original functional requirements.