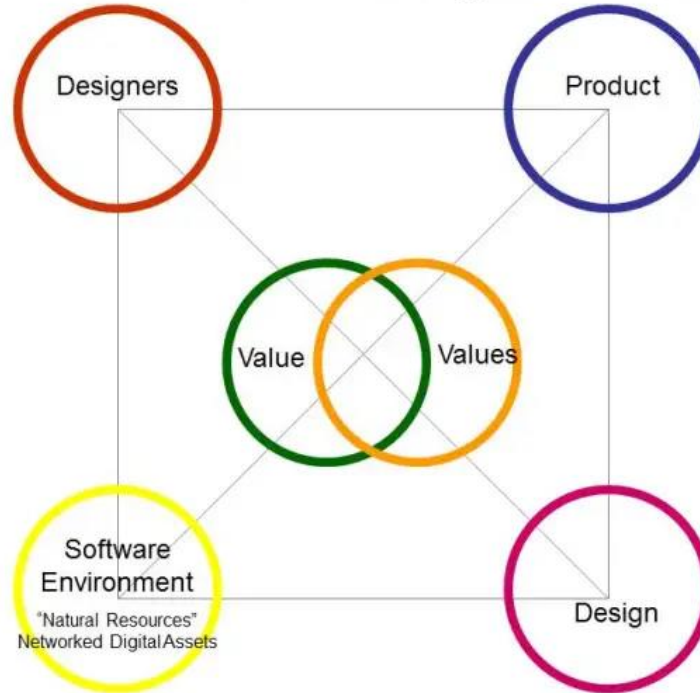# Software Design Basics, Analysis and Design Tools

Prepared by

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Software Design Levels

- Modularization: Modularization is a technique to divide a software system into multiple discrete and independent modules, which are expected to be capable of carrying out task(s) independently. These modules may work as basic constructs for the entire software. Designers tend to design modules such that they can be executed and/or compiled separately and independently . Modular design unintentionally follows the rules of 'divide and conquer problem-solving strategy this is because there are many other benefits attached with the modular design of a software.

Modularization and Concurrency

- In software engineering, coupling is the **degree of interdependence between software modules**; a measure of how closely connected two routines or modules are; the strength of the relationships between modules.
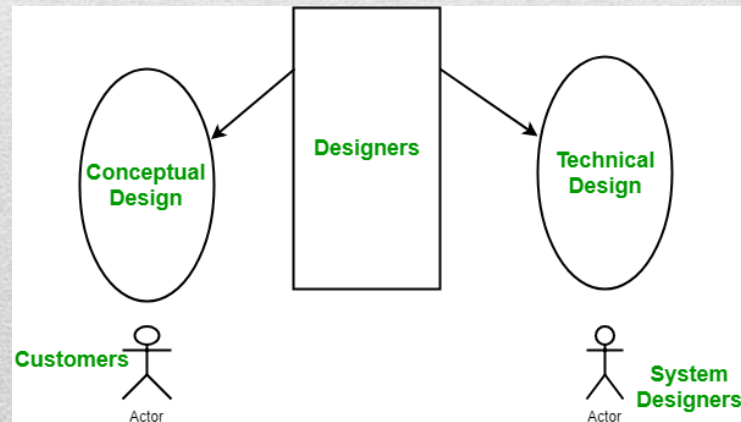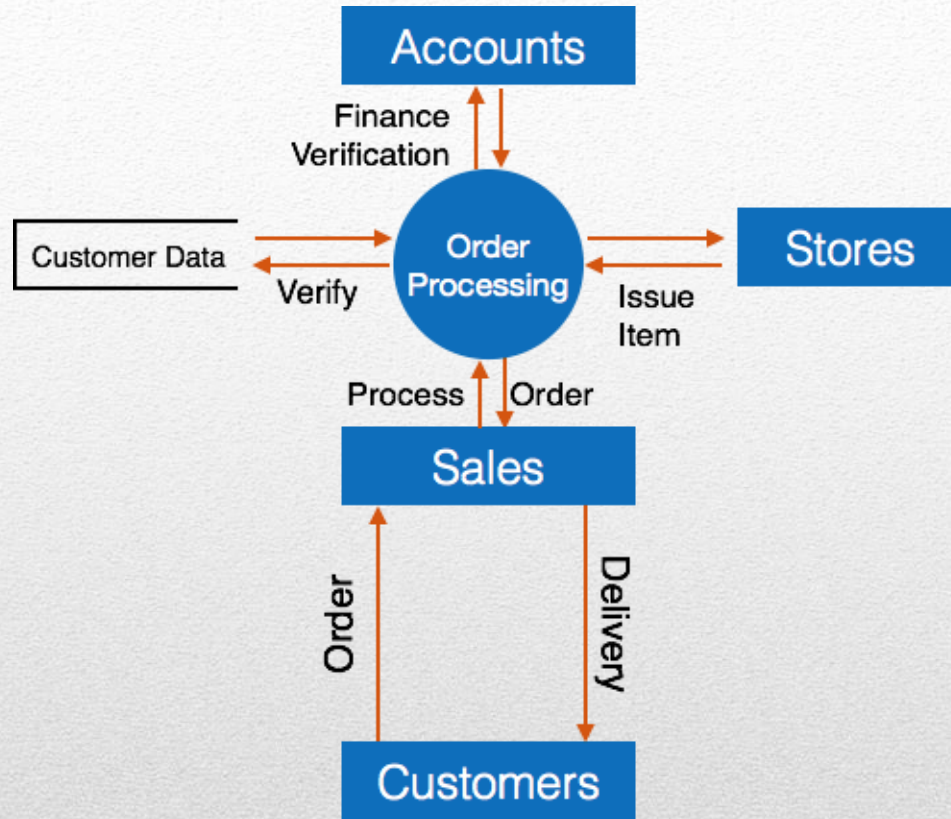

Coupling

- cohesion refers **to the degree to which the elements inside a module belong together**. In contrast, low cohesion is associated with undesirable traits such as being difficult to maintain, test, reuse, or even understand. Cohesion is often contrasted with coupling, a different concept.
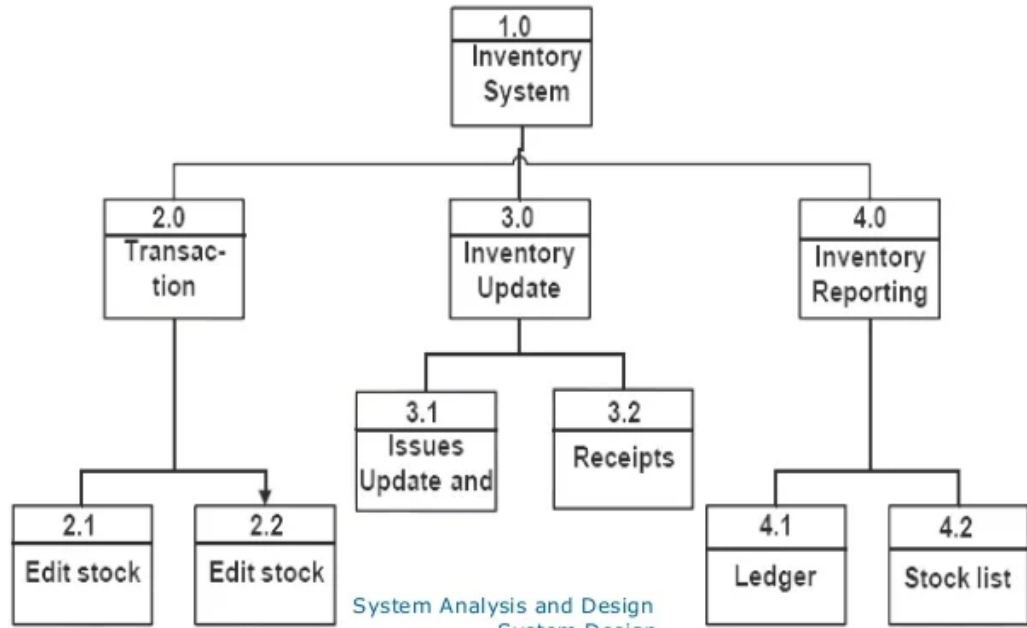
Cohesion

Data flow Diagram and Structure Charts

Hierarchical input process output