Software Design 10/08/2023

There are two designs which can be applied anywhere in the real world:

- Modular Design
- Layered Design

Modularity and Modular design

- Modules must be almost independent from each other. ***High cohesion and low coupling.***
- Modularity is based on *divide and conquer principle*.

> 💡 Simplest way of interconnectivity among the two modules is by the function call which only involves primitive or simple datatypes. No pointer or reference passing is there.

- Modularity ensures reusability. Also future updates and enhancements are easier in modular designs and low coupling make it more easier.

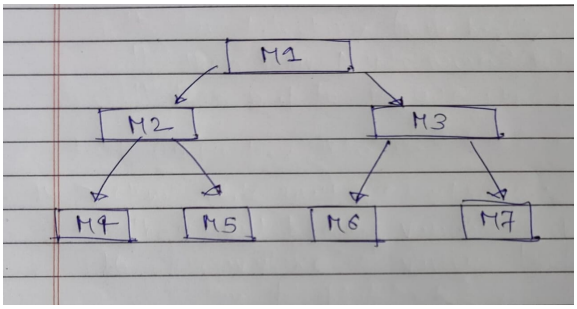
> 💡 Low coupling ensures that if there is some change in the internal implementation of the module, then there must not be any effect outside or in its outer interface. That's what called the contractual form of Object-oriented design.

Layered Design

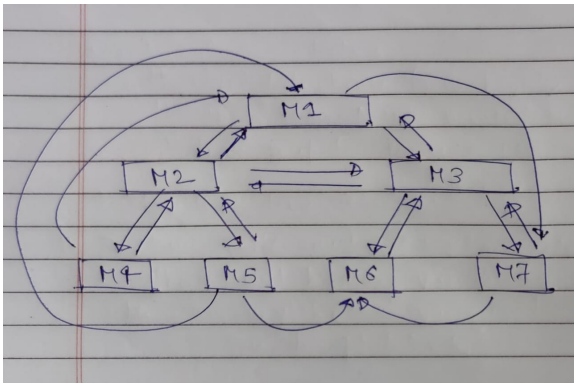
Modularization must be such that different modules can be arranged into the layered structures, also called the tree-like structure.

It insists in separation of concerns among different levels of abstraction.

Designing:



- This must be the case. Proper tree like structure in layered and modular design.



- This must not be the case.