Design Strategies

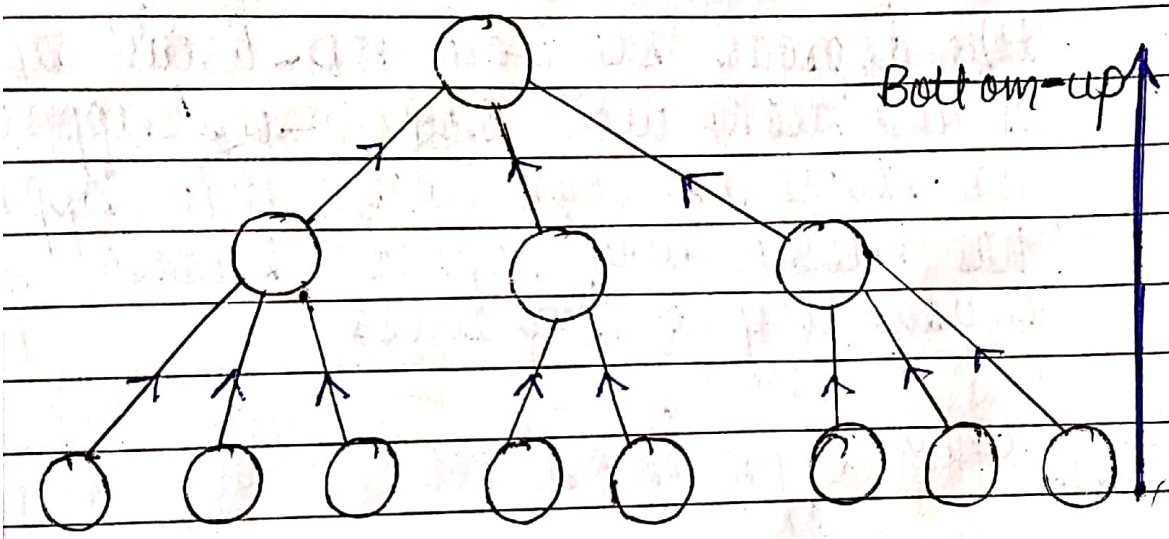
A good system design strategy is to organize a program modules in such a way that they are easy to develop and easy to change (if required).

Structured design techniques help developers to deal with the project size and program complexity. It also helps the developer for writing the code.

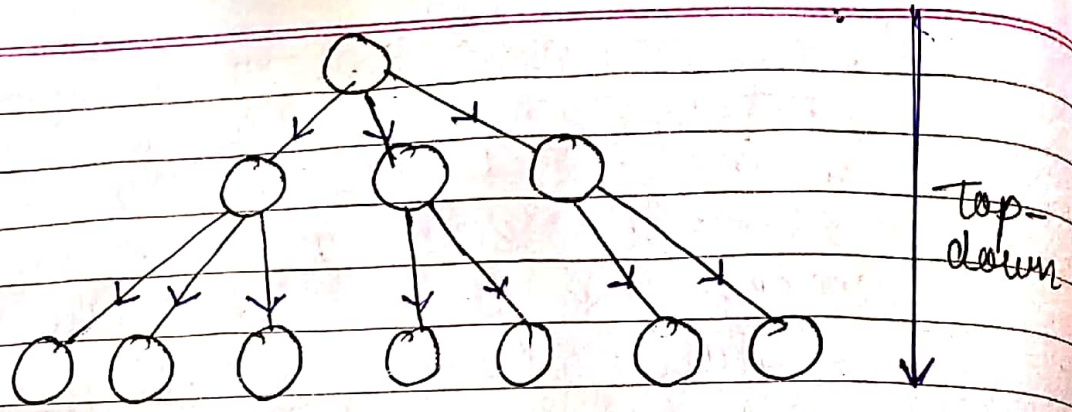
Various design strategies are.

* Bottom-up approach: This leads to a style of a design where we decide how to combine modules to provide larger modules until we arrive at one big module. This big design is whole of the software program as design progresses

from bottom to top. The weakness of this approach is that we need a lot of intuition to decide what functionality a module should provide. If we get wrong then at the higher level the module will not be required and we will have to redesign the product from the lower levels.



Top-down approach: A top-down approach starts by identifying the major modules of the system. They are decomposed in low level modules and we repeat this until the desired level of details is achieved. This is a step-by-step refinement process starting from an abstract design and in each step the design is refined into a more detailed design until we reach a level where no refinement is needed and the design can be implemented.



* Hybrid approach: It is a combination of top-down and bottom up approach. In this approach the basic top-down approach is used along with bottom-up approach in lowest design levels. This approach has become very popular because of the reusability of modules

NOTE: Other approaches:

* Function oriented approach
* Object oriented approach

Design Document

The outcome of designing phase is known as detail design document. Based on this document the next phase of SDLC will be executed. A design document may include scope, system objective, software requirement and design limitations. It also includes data structures and database structures, architectural design, interface design, procedural design, test provisions and references. The coding or module-

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mentation phase starts with the information written in design document.

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