HIGH LEVEL DESIGN

INTRODUCTION:

HLD gives the architecture of the software product to be developed and is done by architects and senior developers. The architecture diagram provides an overview of an entire system, identifying the main components that would be developed for the product and their interfaces.

It includes the description of system architecture, data base design, brief description on systems, services, platforms and relationship among modules.

It is created by solution architect. The participants are design team, review team, client team. It is created first means before Low level Design.

The HLD will:

- present all of the design aspects and define them in detail
- describe the user interface being implemented
- describe the hardware and software interfaces
- describe the performance requirements
- include design features and the architecture of the project
- list and describe the non-functional attributes like:
    - security
    - reliability
    - maintainability
    - portability
    - reusability
    - application compatibility
    - resource utilization
    - serviceability

Main Design Features:

The main design features include five major parts: the architecture, the user interface design, external interface, the database, process relation, and automation.

Purpose:

- Preliminary design :- In the preliminary stages of a system development, the need is to size the project and to identify those parts of the project that might be risky or time-consuming.

- Design overview :- As the project proceeds, the need is to provide an overview of how the various sub-systems and components of the system fit together.

- In both cases the high-level design should be a complete view of the entire system, breaking it down into smaller parts that are more easily understood. To minimize the maintenance overhead as construction proceeds and the lower-level design is done, it is best that the high-level design is elaborated only to the degree needed to satisfy these needs.

Overview:

- A high-level design provides an overview of a system, product, service or process.

- Such an overview helps supporting components be compatible to others.

- The highest-level design should briefly describe all platforms, systems, products, services and processes that it depends on and include any important changes that need to be made to them.

- In addition, there should be brief consideration of all significant commercial, legal, environmental, security, safety and technical risks, issues and assumptions.

- Most high-level designs require contributions from a number of experts, representing many distinct professional disciplines.

- Finally, every type of end-user should be identified in the high-level design and each contributing design should give due consideration to customer experience.

Example of a high level design:

- Mobile clients for upload from phone and search for media assets.
- Desktop client for bulk import/export of both media and related information.
- Web application for searching among media assets.
- Web application for user management, i.e. party domain.
- User login with password, two-phase authentication and encryption.