SYSTEM DEVELOPMENT LIFE CYCLE : DATABASE DESIGN

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# DATABASE DESIGN

Database design is the way toward delivering a definite information model of a database. This information show contains all the required sensible and physical plan decisions and physical stockpiling parameters expected to produce an outline in an information definition dialect, which would then be able to be utilized to make a database. A completely credited information display contains point by point traits for every substance.

The term database configuration can be utilized to depict various parts of the outline of a general database framework. Mainly, and most accurately, it can be thought of as the coherent outline of the base information structures used to store the information. In the social model these are the tables and perspectives. In a protest database the elements and connections delineate to question classes and named connections. Be that as it may, the term database configuration could likewise be utilized to apply to the general procedure of outlining the base information structures, as well as the structures and questions utilized as a feature of the general database application inside the database administration framework (DBMS).

The process of doing database design generally consists of a number of steps which will be carried out by the database designer. Usually, the designer must determine the data to be stored in the database,  determine the relationships between the different data elements, superimpose a logical structure upon the data on the basis of these relationships

The way toward doing database configuration by and large comprises of various advances which will be done by the database creator. As a rule, the architect must decide the information to be put away in the database. Furthermore, database design also decide the connections between the distinctive information components. Other than that it also superimpose a consistent structure upon the information based on these connections.

The database configuration stage is isolated into three stages which are conceptual database design, logical  database design and physical database design.

**Conceptual design**

Once all the requirements have been collected and analyzed, the next step is to create a conceptual schema for the database, using a high level conceptual data model. This phase is called conceptual design. The result of this phase is an Entity-Relationship (ER) diagram. It is a high-level data model of the specific application area. It describes how different entities (objects, items) are related to each other. It also describes what attributes (features) each entity has. It includes the definitions of all the concepts (entities, attributes) of the application area. During or after the conceptual schema design, the basic data model operations can be used to specify the high-level user operations identified during the functional analysis. This also serves to confirm that the conceptual schema meets all the identified functional requirements. There are several notations to draw the ER diagram.

**Logical design**

The consequence of the intelligent plan stage (or information demonstrate mapping stage) is an arrangement of connection schema. The ER chart or class graph is the reason for these connection patterns.To make the connection schema is a significant mechanical task. There are administers how the ER model or class chart is exchanged to connection schema. The connection patterns are the reason for table definitions. In this stage (if not done in past stage) the essential keys and outside keys are characterized.

**Physical design**

The objective of the last period of database outline, physical plan, is to execute the database. At this stage one must know which database administration framework (DBMS) is utilized. For instance, extraordinary DBMS’s have diverse names for datatypes and have distinctive datatypes. The SQL conditions to make the database are composed. The indexes,the honesty imperatives (rules) and the clients’ entrance rights are characterized. At long last the information to test the database is included.

In parallel with these exercises, application programs are composed. The usage of the projects can begin when the database is made and information has been included.