

- 1). Data cleaning is defined as removal of noisy and irrelevant data from collection. As a part of this process noisy, redundant data is removed so accuracy of data increases. Missing values are also filled.
- 2). Data Integration:- It is defined as combining Heterogeneous data from multiple sources. Data Integration is done by ETL (Extract - Load - Transformation).
- 3). Data Selection:- This process is defined as process where data which are only relevant to analysis is decided and retrieved from the data source.
- 4). Data Transformation:- Data transformation is defined as process of transforming data into appropriate form required by mining process. Techniques here used are Dimension reduction, feature selection.
- 5). Data Mining:- In this step different techniques are applied to extract potential patterns and Informations.

Atomicity: All statements of transaction must succeed completely or fail completely in each and every situation including power failures, errors and crashes.

Consistency: The database must remain in consistent state after any transaction. Data in database should not have any changes other than intended after transaction completion.

Isolation: Isolation ensures that concurrent execution of transactions leaves database in same state that would have been obtained if transactions were executed sequentially.

Durability: It guarantees that once transaction has been committed, it will remain committed even in case of system failure which actually ~~means~~ means recording completed transaction in nonvolatile memory.

Object oriented programming is programming Paradigm. Java tried to follow oop paradigm. It provides many oop concepts like Encapsulation, Abstraction, polymorphism, Inheritance.

Encapsulation:- In Encapsulation data-Attribute and methods related to single object are kept together (Encapsulated).

By using classes in Java we can achieve Encapsulation.

Abstraction:- Abstraction is way to hide the internal complexity of process from user.

for example making a phone call - we don't know how internally it works we just know how to make a call.

Inheritance:- Inheritance allows to use existing features of other class to be used it in another class. the class from which we derive is called Super or Base class. the derived class is also called as child class. Java does not allows multiple Inheritance.

A DBMS has appropriate languages and interfaces to ~~express~~ ^{express} database queries and updates. Database languages can be used to read, store and update the data in database. Types of database languages:

1) DDL 2) DML 3) DCL 4) TCL

1) Data Definition language. It is used to define database structure or pattern. It is used to create schema, table, index, etc. in database. Using DDL statements, you can create skeleton of database.

2) DML: Data Manipulation language. It is used for accessing and manipulating data in database. It handles user requests. Some tasks: Select. It is used to retrieve data from database. Insert. It is used to insert data into table. Update: It is used to update existing data ~~in~~ within a table.

3) Data Control language: It is used to retrieve the stored or saved data. The DCL execution is transactional. It also has rollback parameters.

Kernel is central component of operating system that manages operations of computer and hardware.

It basically manages operations of memory and CPU time. It is core component of operating system. Kernel acts as bridge between application and data processing performed at hardware level using inter-process communication and system calls.

Kernel loads first into memory when operating system is loaded and remains into memory until operating system is shut down again.