



INSTITUTE OF INFORMATION TECHNOLOGY
JAHANGIRNAGAR UNIVERSITY

Assignment : 01
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Answer to the question no-1

A database is an organized collection of structured information or data typically stored electronically in a computer system. A database is usually controlled by a database management system. Database contains information relevant to an enterprise. Database systems are designed to manage large bodies of information and providing mechanisms for the manipulation of information. In addition the database system must ensure the safety of the information stored despite system crashes or attempts at unauthorized access. If data are to be shared among several users the system must avoid possible anomalous results.

Answer to the question no-2

a. Entity: An entity is an object that exists. Entity are such thing about which we store data. In database entity can be a single thing Person, Place or object. In database only those things about which data will be captured or stored is considered an entity. If we are not going to capture data about something there is no point in creating an entity in database.

example:

Student

ID	Name
1001	Shakil
1002	Rahim

→ entity

→ entity

A b. Attribute: An attribute defines the information about the entity that needs to be stored. If the is student attribute could include id, name, session. An entity will have zero or more attributes and each of those attributes apply only to that entity.

Example:

Student		
ID	Name	→ Attribute
1001	Shakil	
1002	Rahim	

c. Schema: The over all design of the database is called schema. A database schema corresponds to the variable declarations in a program. Each variable has a particular variable at a given instant. When we create a database named student here we have to define attributes type and all these design or blueprint is called schema.

d. Instance: The collection of information stored in database at a particular moment of time is called instance of the database. It can change with time. It is a dynamic concept. It can change over time as information is inserted and deleted.

Example:

Student

ID	Name
1001	Shakil
1002	Rahim

instance is 2

Student

ID	Name
1001	Shakil
1002	Rahim
1003	Karim

instance is 3

e. Record: A record in a database is an object that can contain one or more values. A record is simply a set of data stored in a table.

Example:

student

ID	Name
1001	Shakil
1002	Rahim

→ Record 1

→ Record 2