pre-lab

1. Jack has to select Database management systems over file based systems

The reasons are :-

1. Less redundancy in the case of database approach and the data remains consistent

2. Data security - It is easier to apply access constriants in database systems so that only authorized user is able to access the data

3. Easy access to data - Database systems manages data in such a way so that the data is easily accessible with fast response times.

4. Flexible - Database systems are more flexible than file processing systems

5. Integrity can be enforced by restricting unauthorized access

2. Data Inconsistency is a situation where there are multiple tables within a database that deal with same data but may receive it from different inputs. The main hazard of Data inconsistency is that these file might duplicate personal data like address

3. The main difference between databases is that centralized works with a single database and on the otherhand distributed database works with multiple databases.

4. keys are used to establish / identify any relationship between tables and also to uniquely identify any record (or) row of data inside a table.

classifications :-

1. candidate key - set of keys that is minimal and can be uniquely identify any data row in the table

2. primary key :- It is selected from one of the candidate keys and becomes the identifying key of a table. It can uniquely identify any data row of the table.

3. super key :- Super key is super set of primary key. It contains set of attributes including primary key which can uniquely identify any data row in the table

4. **Composite key :-** If any single attribute of a table not capable of being the key, then we combine two or more attribute to form a key. This is known as composite key

5. **Secondary key :-** only one of the candidate keys is selected as primary key. The rest of them are known as secondary keys.

190031187

Ni V.Padhaknshna

190031187
N·V·Radhakrishna ·

post - lab

1. **Weak Entity set:**

   An entity set that does not contain sufficient attributes to uniquely identify is weak entity set.
   primary key does not exits for week entity set·

2. **Data Independence**

   It is the ability to make changes to data characteristics without having to make changes to the programs that access the data.

3. **Attribute:**
   It is a specification that defines a property of an object element (or) file.

   Types of attributes are

   (1) **simple** attributes

            Cannot be further divided into simpler attributes

       Ex:- Id·no of a student

(2) composite Attributes

can be divided into simpler attributes

En: DOB of students

(3) single valued Attributes

Can take only a single value for each entity instance

(4) Multi valued Attributes

Can take multiple values for each entity instance

(5) Derived Attributes

That can be calculated based on other attributes

En: Age

4. Difference between entity type & entity set:-

Entity type is a collection of similar entities. An entity set is a collection of entities of an entity type at a point of time.

5. Difference b/w primary key & unique key

primary key

cannot be null

only one primary key can be present in a table

Unique key

190031187
N·V·Padha krishna

can be null

Multiple unique keys can be present in a table