**Research activity 3**

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1111difference between Hierarchical database, **difference between Hierarchical database, Network database, Object-oriented database, Relational database**

Hierarchical database

As stated by Techopedia A hierarchical database is a design that uses a one-to-many relationship for data elements. Hierarchical database models use a tree structure that links a number of disparate elements to one "owner," or "parent," primary record

Network database

A network database is a type of database model wherein multiple member records or files can be linked to multiple owner files and vice versa. The model can be viewed as an upside-down tree where each member information is the branch linked to the owner, which is the bottom of the tree. Essentially, relationships are in a net-like form where a single element can point to multiple data elements and can itself be pointed to by multiple data elements.

Object-oriented database

An object-oriented database is a database that subscribes to a model with information represented by objects. Object-oriented databases are a niche offering in the relational database management system (RDBMS) field and are not as successful or well-known as mainstream database engines.

Rational database

A relational database (RDB) is a collective set of multiple data sets organized by tables, records and columns. RDBs establish a well-defined relationship between database tables. Tables communicate and share information, which facilitates data searchability, organization and reporting.

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**What is Entity Attributes Entity Instances**

Entity

An entity is any singular, identifiable and separate object. It refers to individuals, organizations, systems, bits of data or even distinct system components that are considered significant in and of themselves.

Attributes

an attribute is a characteristic. In HTML, an attribute is a characteristic of a page element, such as font size or color. Attributes are used to amplify a tag. When a Web browser interprets an HTML tag, it will also look for its attributes so that it can display the Web page's elements properly.

Entity Instances

**What is Relationship, Optionality,Degree, Many-to-relationships.Many-to-one relationships vi. One-to-one relationships**

Relationship

A relationship in context of database is a situation that exists between two relational database tables when one table has a foreign key that references the primary key of the other table.Relationships allow relational databases to split and store data in different tables,while making disparate data items

Optionality

Degree

Many to many relationships

A Many-to-many relationship refers to a relationship between tables In a database when a parent row in one table contains several child rows in the second table,and visa versa. Many-to-many relationships are often tricky to represent

One to many relationships

One-to-many relationship occurs when a parent record in one table can potentially reference several child records in another table,therefore it allows zero child records,a single child record or multiple child records.The important thing is that the child cannot have more than one parent record

One- to-one relationships

A one-to-one relationship in a relational database occurs when one parent record or field has either zero or one child record only.These relationships are the easiest to represent in a database because both the parent and child records may be in the same table

**What is. Redundancy . Attribute optionality,Attribute documentation Fact data Summary data ,Reference data . Metadata**

Metadata

Metadata is data about data.in other words it is data that is used to describe another items content

Redundancy

Attribute optionality

Attribute documentation

Fact data

Summary data

Reference data

**References**

<https://www.techopedia.com/>