Semicolon Africa E-R Diagram Classwork

1. The disadvantages of file processing include:
2. Slow access time
3. Unauthorized access
4. Redundant data presence
5. Data inconsistency
6. Data integrity problems
7. (a) DBMS stands for Database Management System. It is an electronic data-storing system that requires facilitated users to perform different kinds of operations (manipulation or management) on a data system in the database.

(b) The advantages of DBMS include:

i. It improves data security

ii. It minimizes data inconsistency

iii. It improves data access

iv. It promotes better data integration

(c) The disadvantages of DBMS include:

i. It is more costly

ii. It is highly complex

iii. Database handling individuals are always required

1. The different components of DBMS include:
2. Data
3. Procedures

iii Database Access Language

Iv Hardware

v Software

1. Data anomalies can be described as a fault in a database that usually emerges as a result of faulty planning and storing everything in a database system. It can be removed through the normalization procedure, which involves the joining and splitting of tables.
2. Hierarchical Data Model can be described as a data model in which data is stored in the form of records and organized into a tree-like structure, or parent-child structure, in which one parent entity can have many child entity connected through relationship.
3. Relational Data Model can be described as a collection of information that organizes data in predefined relationships where data is stored in one or more tables of columns and rows, thereby making it easy to see and understand how different data structures relate to each other.
4. ER model stands for an Entity-Relationship model. It is used to define the data elements and relationship for a specified system. It can also be used to develop a conceptual design for database.
5. A table is an object that contains the data in a database which are logically organized in a row and column format. A row consists of a unique record while column consists of a field in the record.

Some characteristics of a table are:

1. It is a two-dimensional structure composed of rows and columns
2. Each tuple (row) represents a single entity occurrence with the set
3. The sequence of columns and rows is insignificant
4. Each column has a unique name
5. Each row is unique
6. Types of keys in relational database are:
7. Super key: It is a combination of columns that uniquely identifies any row within a relational database management system (RDMS) table.
8. Primary key: It is a unique key for each record of a table
9. Candidate key: It is a single key or a group of keys that uniquely identify rows in a table
10. Artificial key: It is an extra/additional attribute added to the table visible to the user
11. Foreign key: It is a column or a group of columns in relational table that provides a link between data in two tables. It is basically a reference to the primary key of another table.
12. Compound key: It is made up of two or more primary keys from other tables
13. Composite key: it is a primary key having two or more attributes
14. Surrogate key: It is generated when a new record is inserted into a table automatically by a database that can be declared as the primary key of that table
15. Unique key: It is a column or set of columns that uniquely identify each record in a table