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UNIT: Database Management System.

ASSINGMENT.

ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database.

Here is an example of representing an entity relationship data model using conceptual ERD symbols:

Entity: Student
Attributes:
- ID
- Name
- Email
- Major

Entity: Course
Attributes:
- ID
- Name
- Credits

Relationship: Student enrolls in Course
Cardinality: Many-to-many

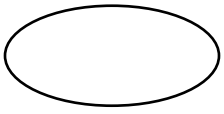
Diagram representation:

Student 1 N Course

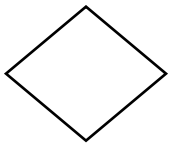
This diagram shows that a student can enroll in many courses, and a course can have many students enrolled in it. The cardinality of the relationship is many-to-many

KEY:

-It represents an entity

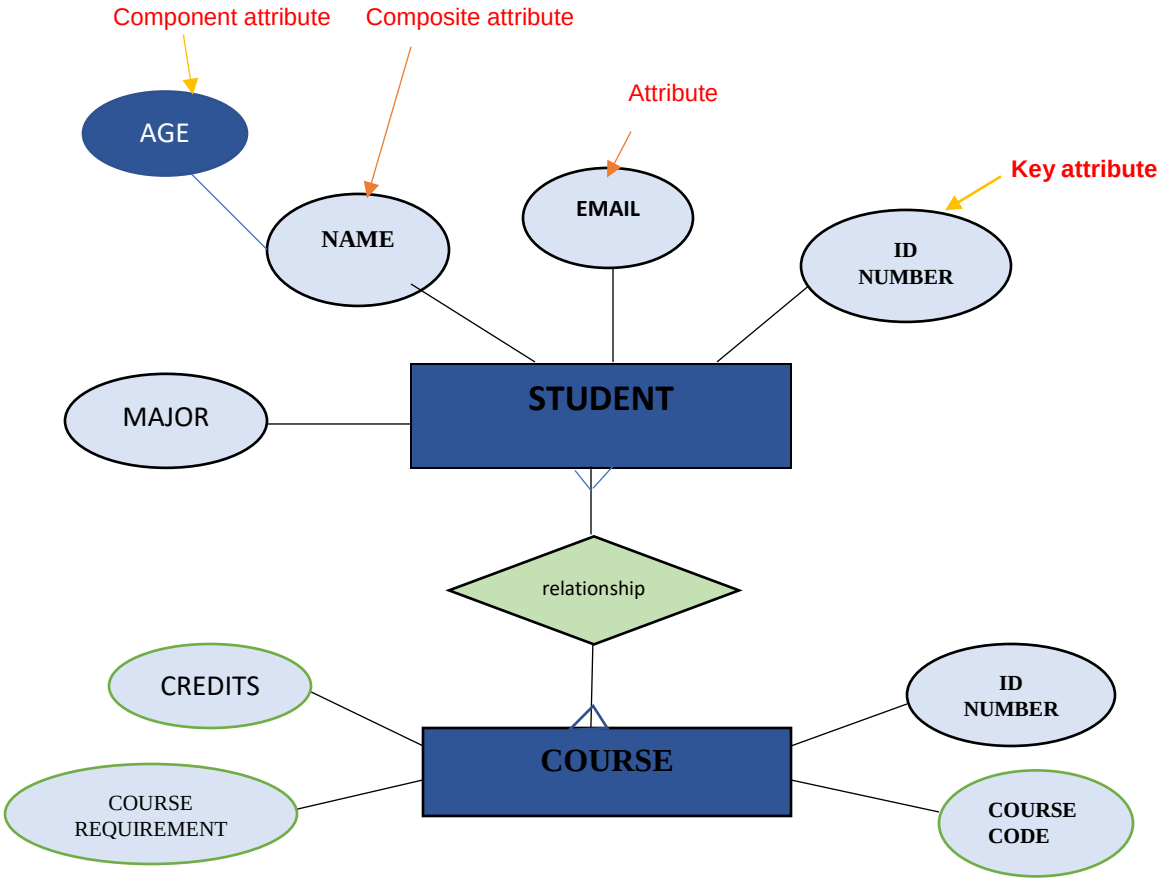


-It represents an attribute or characteristics of the entity.



-It represents a relationship the between attribute.

-It represents many to many relationship.



The following diagram shows the physical ERD symbols for the student-course relationship:

```
Student (1)
+---------+-------+-------------+
| ID      | INT   | PRIMARY KEY |
| Name    | VARCHAR| NOT NULL   |
| Email   | VARCHAR| NOT NULL   |
| Major   | VARCHAR| NOT NULL   |
+---------+-------+-------------+

Course (N)
+---------+-------+-------------+
| ID      | INT   | PRIMARY KEY |
| Name    | VARCHAR| NOT NULL   |
| Credits | INT   | NOT NULL    |
+---------+-------+-------------+
```

```
Student Course (N)
+---------+---------+------------+
| Student ID | INT   | FOREIGN KEY REFERENCES Student(ID) |
| Course ID  | INT   | FOREIGN KEY REFERENCES Course(ID) |
+---------+---------+------------+
```

The `(1)` and `(N)` symbols indicate the cardinality of the relationship. The `(1)` on the `Student` side of the relationship indicates that a student can only have one primary order. The `(N)` on the `Course` side of the relationship indicates that a student can place many orders.

The junction table, `Student Course`, has two foreign keys: `Student ID` and `Course ID`. These foreign keys reference the primary key columns in the `Student` and `Course` tables, respectively. This means that each row in the `Student Course` table represents a relationship between a student and a course.

This physical ERD diagram can be used to generate the SQL code that is needed to create the `Student`, `Course`, and `Student Course` tables in a database.