CHRIST HANZEN Q. RALLOS BSIT-3 Activity: Building an Entity-Relationship Diagram

Part A: Quick Review (Warm-up)

1.) Entity: An entity is a person, place, or thing we want to keep track of in a system.

Attribute: An attribute is a fact or detail that tells us more about the entity.

Primary Key: A primary key is a special ID that makes each entity different from all the others.

Foreign Key: A foreign key is like a link or pointer that connects one entity to another.

Cardinality: Cardinality tells us how many entities are related to each other, like one-to-one or one-to-many.

2.) One-to-One

Example: A person and their passport — one person has only one passport, and each passport belongs to one person.

One-to-Many

Example: A teacher and the students they teach — one teacher can teach many students, but each student has only one main teacher.

Many-to-Many

Example: Students and courses — a student can take many courses, and each course has many students.

Part B: Guided Case Scenario (Main Activity)

Case: University Enrollment System

1.) These are the four main entities are: Student, Subject, Professor and Enrollment.

2.) 1. Student

Student ID (Primary Key)

Name

Course

Year Level

2. Subject

Subject Code (Primary Key)

Subject Name

Units

3. Professor

Professor ID (Primary Key)

Name

Department

4. Enrollment

Enrollment ID (Primary Key)

Student ID (Foreign Key)

Subject Code (Foreign Key)

Semester

School Year

3.) A Student can have many Enrollments (1-to-many).

A Subject can have many Enrollments (1-to-many).

A Professor can teach many Subjects, but each Subject is taught by only one Professor (1-to-many).  
  
4.) Create ERD & Part C: Bonus Challenge:  


Part D: Reflection

1.) Why is an ERD important before creating database tables?

An ERD helps us plan how to organize data and show how things are connected before making the tables.

2.) What challenges did you encounter while designing your ERD?

It was hard to decide how things relate and make the diagram clear and correct.