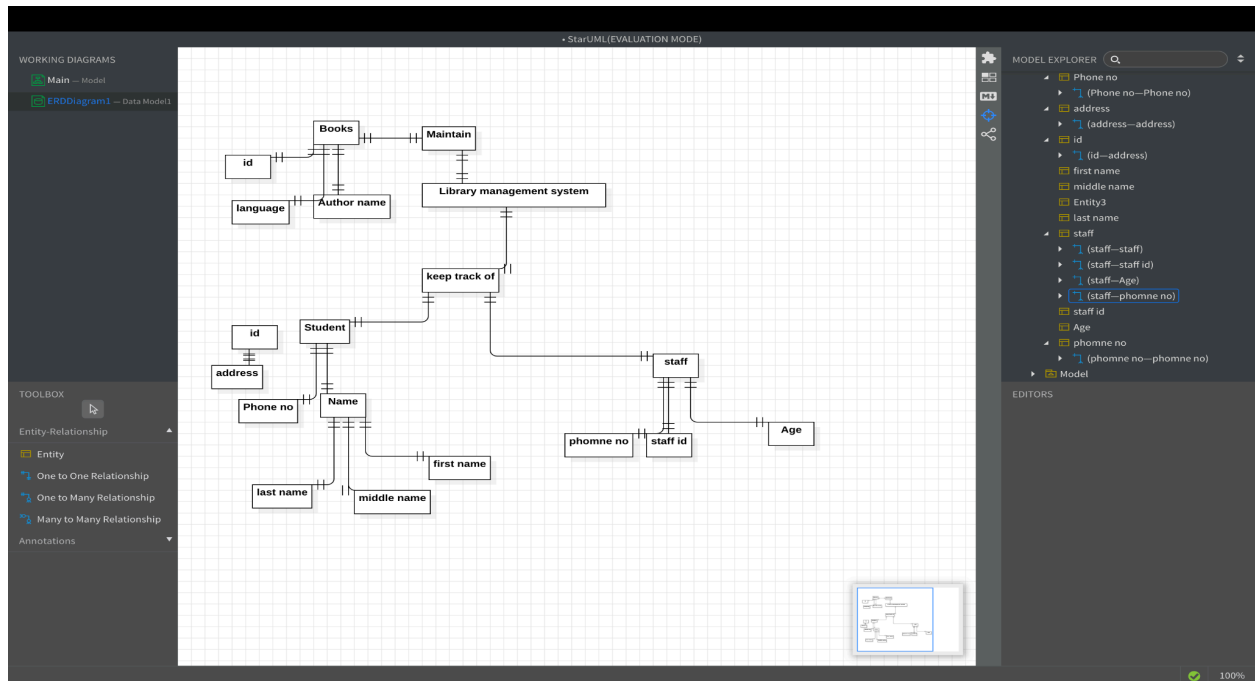


Question 1 : Draw an ER diagram in STARUML ?



Question 2 : Draw a ER diagram In ms word with shapes ??

- A user may have many assessments, assignments, and grades.

Course

- **Definition:** A course offered by an institution or instructor.
- **Attributes:**
 - **CourseID (Primary Key)**
 - **Title**
 - **Description**
 - **StartDate**
 - **EndDate**
 - **InstructorID (Foreign Key referencing User)**
- **Relationships:**
 - A course may have many students enrolled.
 - A course has one instructor.
 - A course may have many assignments and assessments.

Enrollment

- **Definition:** The act of a student registering for a course.
- **Attributes:**
 - **EnrollmentID (Primary Key)**
 - **UserID (Foreign Key referencing User)**
 - **CourseID (Foreign Key referencing Course)**
 - **EnrollmentDate**
- **Relationships:**
 - A student can enroll in many courses.
 - A course can have many students enrolled.

Grade

- **Definition:** The score or mark given to a student for a completed assignment or assessment.
- **Attributes:**

- GradeID (Primary Key)
- UserID (Foreign Key referencing User)
- AssignmentID (Foreign Key referencing Assignment, optional)
- AssessmentID (Foreign Key referencing Assessment, optional)
- Score
- DateAwarded

User-Enrollment-Course

- A User (Student) enrolls in one or many Courses through the Enrollment entity.
- A Course can have many Users (students) enrolled.

2.2 Course-Assignment

- A Course can have many Assignments.
- An Assignment is related to a specific Course.

2.3 Course-Assessment

- A Course can have many Assessments (quizzes, exams).
- An Assessment is linked to a specific Course.

2.4 Course-Instructor

- A Course has one Instructor (a User with the role of Instructor).
- An Instructor can teach many Courses.

:: Entities: User, Course, Enrollment, Assignment, Assessment, Grade, Discussion Forum, Post

:: Relationships:

- Users enroll in Courses.
- Courses have Assignments and Assessments.
- Users have Grades for Assignments/Assessments.
- Courses have Discussion Forums, and Users post in Forums.

- Instructors manage Courses and Assessments.

User

- **Definition:** Represents individuals who interact with the LMS. This includes students, instructors, and administrators.
- **Attributes:**
 - UserID (Primary Key)
 - FirstName
 - LastName
 - Email
 - Role (Student, Instructor, Admin)
 - Password
 - DateJoined
 - ProfilePicture
 - PhoneNumber

Relationships:

- A User can enroll in many Courses.
- A User can create and participate in Assignments, Assessments, and Discussion Posts.
- . Course
- GRADE
- Enrollment
- User: Students, Instructors, and Admins.
- Course: A course offered by the institution.
- Assignment: Tasks students need to complete in a course.
- Assessment: Tests or exams to assess student performance.
- Grade: Scores awarded for completing assignments and assessments.
- Enrollment: Record of students registering for courses.
- Discussion Forum: A space for students and instructors to discuss course topics.

- **Post:** Individual messages within a forum.
-
- **Material:** Learning resources (documents, videos, etc.).
-
- **Message:** Communication between users (instructors, students).
-
- **Certificate:** Awarded to students upon course completion.
-
- **Calendar/Event:** Important dates and events related to courses and users.
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