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# Lab Assignment 10 - ER Diagram

## Instructions

1. Answer the below question in the boxes.
2. Please submit the assignment through TalentLabs Learning System.

## Part 1 - Access to Online ERD Tool

1. Visit Online ERD Tool website
    - https://online.visual-paradigm.com/diagrams/features/erd-tool/
    - Google Chrome is recommended to access the ERD Editor

2. Scroll down and click on an ERD template
    - A page will show up. Click “EDIT THIS TEMPLATE” will launch the ERD Editor with the ERD template

3. Explore some of the ERD template and try out the editor
    - Create entities by dragging the entity logo from the toolbox at the left
    - Resize the new entity by dragging the corner of the shape
    - Add columns to entity by right clicking on an entity
    - Set primary keys and foreign keys by right clicking on a column
    - Set relation by dragging from an edge on an entity to another

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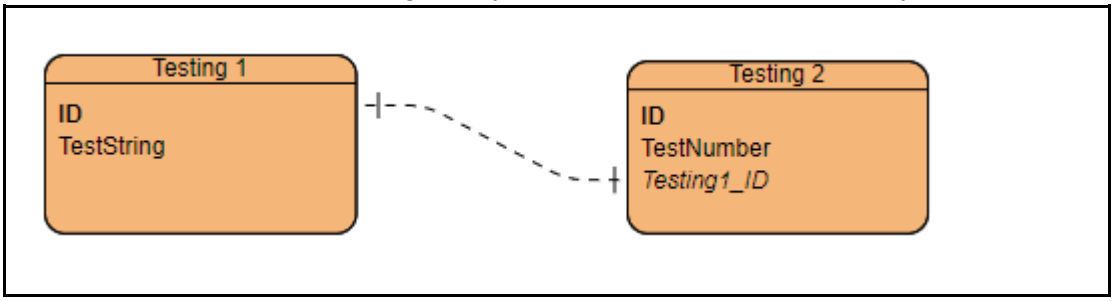
# Part 2 - Build an ER Diagram

1. Open the link: https://online.visual-paradigm.com/diagrams/features/erd-tool/
2. Click “Make an ERD” and you will have an empty canvas for drawing ERD
3. Create an entity named “Testing 1” with below columns criteria (optional to specify data type)
    - A primary key column named as “ID”
    - A column named as “TestString”
4. Create another entity named “Testing 2 with below columns criteria (optional to specify data type)
    - A primary key column named as “ID”
    - A column named as “TestNumber”
5. Set a relationship by connecting “Testing 1” entity to “Testing 2” entity
    - Hover the mouse to the edge of the “Testing 1” entity
    - An arrow will show up
    - Drag the arrow to an edge of “Testing 2” entity
    - Select one-to-one relationship
    - Bonus: Add a corresponding foreign key to the connected entity
6. Post a screenshot of the “Testing” entity with a relation to another entity



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# Part 3 - Study College ERD template

1. Open the link: https://online.visual-paradigm.com/diagrams/templates/entity-relationship-diagram/college/
2. Read the ER Diagram and list out the below items
    - The tables specified in the ER Diagram
    - The columns specified in each table
    - The primary key / foreign key of each table
        - Specify the primary key as “PK” besides the column name
        - Specify the foreign key as “FK” besides the column name
        - Hint: Right click on the column names and observe the font style

3. Task: Fill in the below table. Each row should contain one column name of one table on ERD. You can append the table rows as needed.

| **Table Name** | **Column Name (PK / FK)** |
|---|---|
| Student | ID (PK) |
| | FirstName |
| | LastName |
| | Phone |
| Course_Student | CourseID (PK & FK) |
| | StudentID (PK & FK) |
| Course | ID (PK) |
| | DepartmentName (FK) |
| | InstructorID (FK) |
| | Duration |
| | Name |
| Department | Name (PK) |
| | Location |
| Instructor | ID (PK) |
| | DepartmentName (FK) |
| | headedBy(FK) |
| | FirstName |

| | |
|---|---|
| | LastName |
| | Phone |

## Part 4 - Open DB Browser for SQLite and open the Movie database

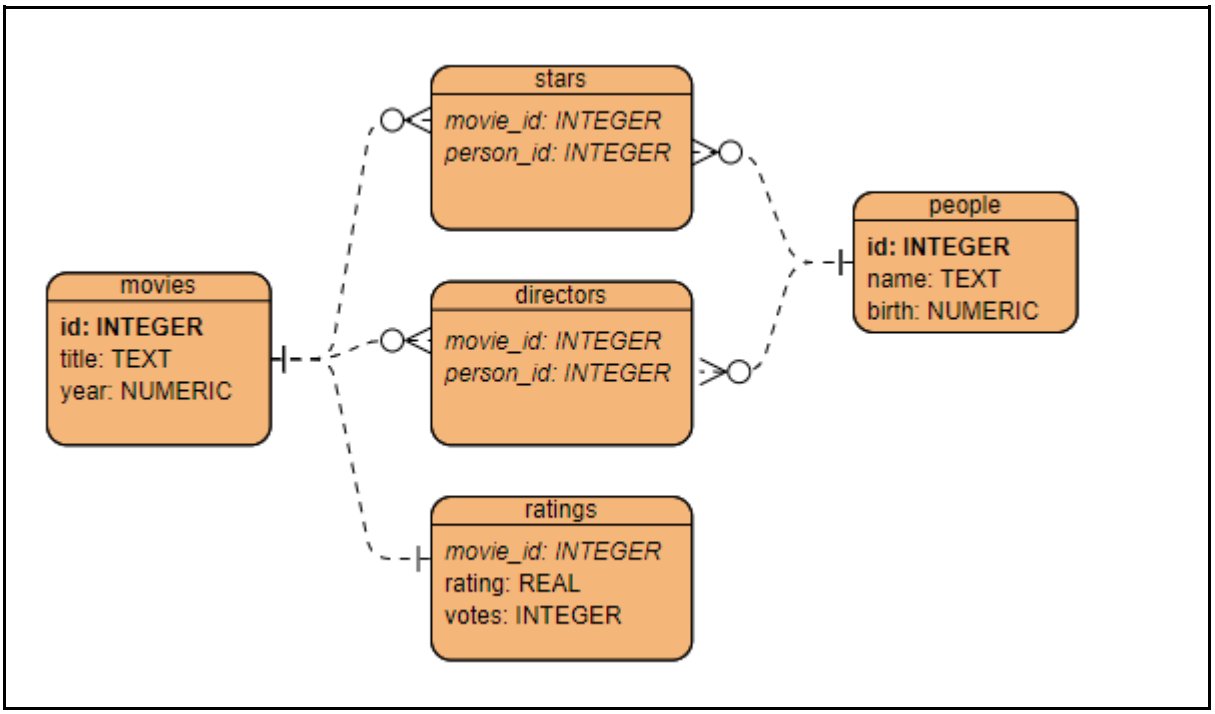
1. In the Database Structure tab, with the given information, fill in the below items
    - The tables specified in the Database Structure tab
    - The columns specified in each table
    - The primary key / foreign key of each table
        - Specify the primary key as “PK” besides the column name
        - Specify the foreign key as “FK” besides the column name

| Table Name | Column Name (PK / FK) |
|---|---|
| directors | movie_id (FK) |
| | person_id (FK) |
| movies | id (PK) |
| | title |
| | year |
| people | id (PK) |
| | name |
| | birth |
| ratings | movie_id (FK) |
| | rating |
| | votes |
| stars | movie_id (FK) |
| | person_id (FK) |

2. Draw an ER Diagram for the Movie Database
    - Go to https://online.visual-paradigm.com/diagrams/features/erd-tool/

- Scroll down and click “Make an ERD”
- Click “Start from blank”
- Start by dragging new entities from the left toolbox
- The ERD should include entities and columns
- Primary keys and foreign keys should be specified
- Link the entities with relations (one to one, one to many, many to one)
- Data type is optional

3. Paste a screenshot of the finished ERD below




**- End of Assignment -**