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

1. 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

1. 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”

1. 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”
2. 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

1. 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

1. 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.

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| **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 |

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## 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

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| 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) |

1. 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

1. Paste a screenshot of the finished ERD below

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**- End of Assignment -**