IST 659: Lab-2

Problem 1: You are asked to design a database for Oswego new call center. Oswego members can make any number of phone calls to customer care representatives in the call center. Each call can be handled by only one customer care representative. Throughout the day each customer care representative will attend any number of calls assigned to him or her. All the customer care representative information is required. After each call, the Oswego member will give rate the customer care representative service to be either OK or KO. Depending on the status of the review from the member, the performance points (OK = 1, KO = 0) will be added to the customer care representative. Also, at the end of each month the variable pay will be calculated based on the performance points of each customer care representative. For example, the variable pay can be (the number of OKs/total number of calls handled by the employee) TIMES 0.5 TIMES the customer care representative's base salary. This variable pay will then be added to Basic salary and the Total salary of the customer care representative will be established.

- Necessary Assumptions (Business Rules):

  - Oswego Call Center must have at least one employee. Conversely, every employee must belong to Oswego call center
  - Each customer care representative attends at least one call. Conversely, one call must be attended by only one customer care representative
  - One Oswego Member can make multiple calls to the customer care representatives. Conversely, each calls must belong to one Oswego member
  - One Oswego Member must rate one customer care representative after one respective call. Conversely, one customer care representative must get multiple ratings from multiple calls
  - Each call must be used to evaluate the Salary of the employee. Conversely, salary of each employee must be based upon each call
  - Each Customer care representative must have only one salary evaluation. Conversely, one salary evaluation must belong to only one employee

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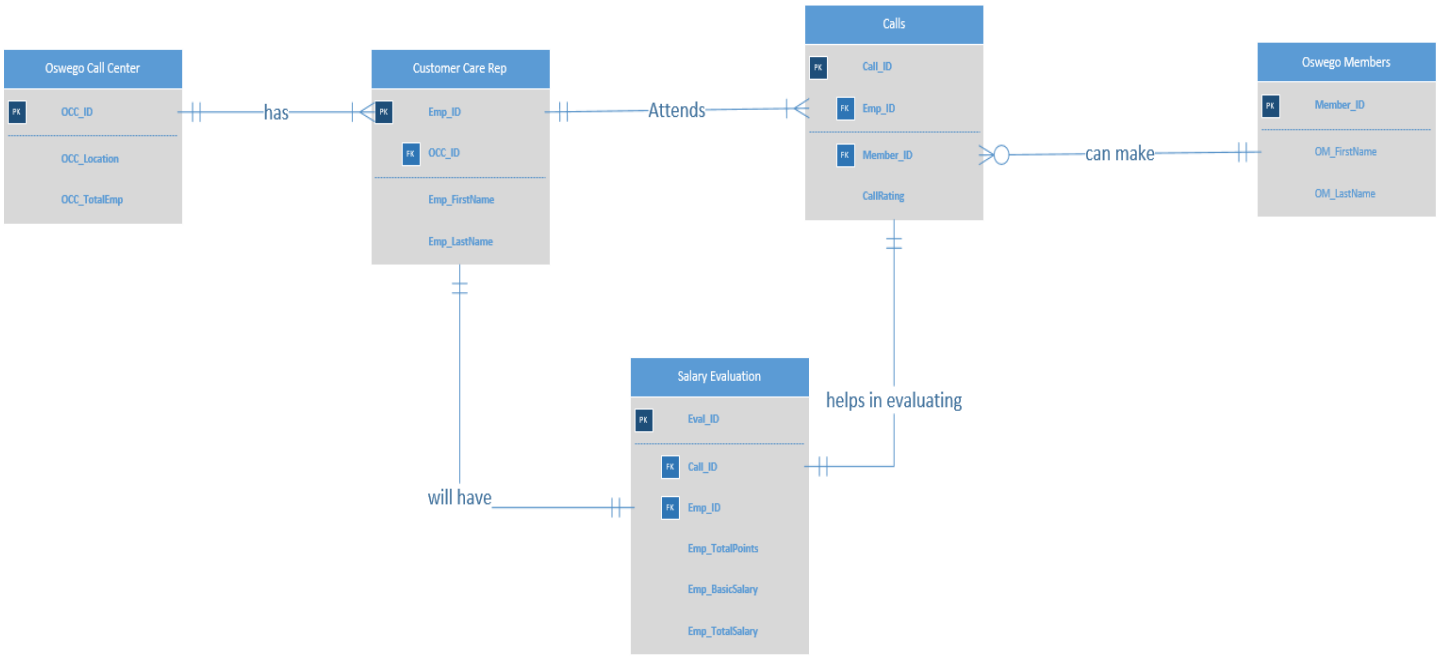

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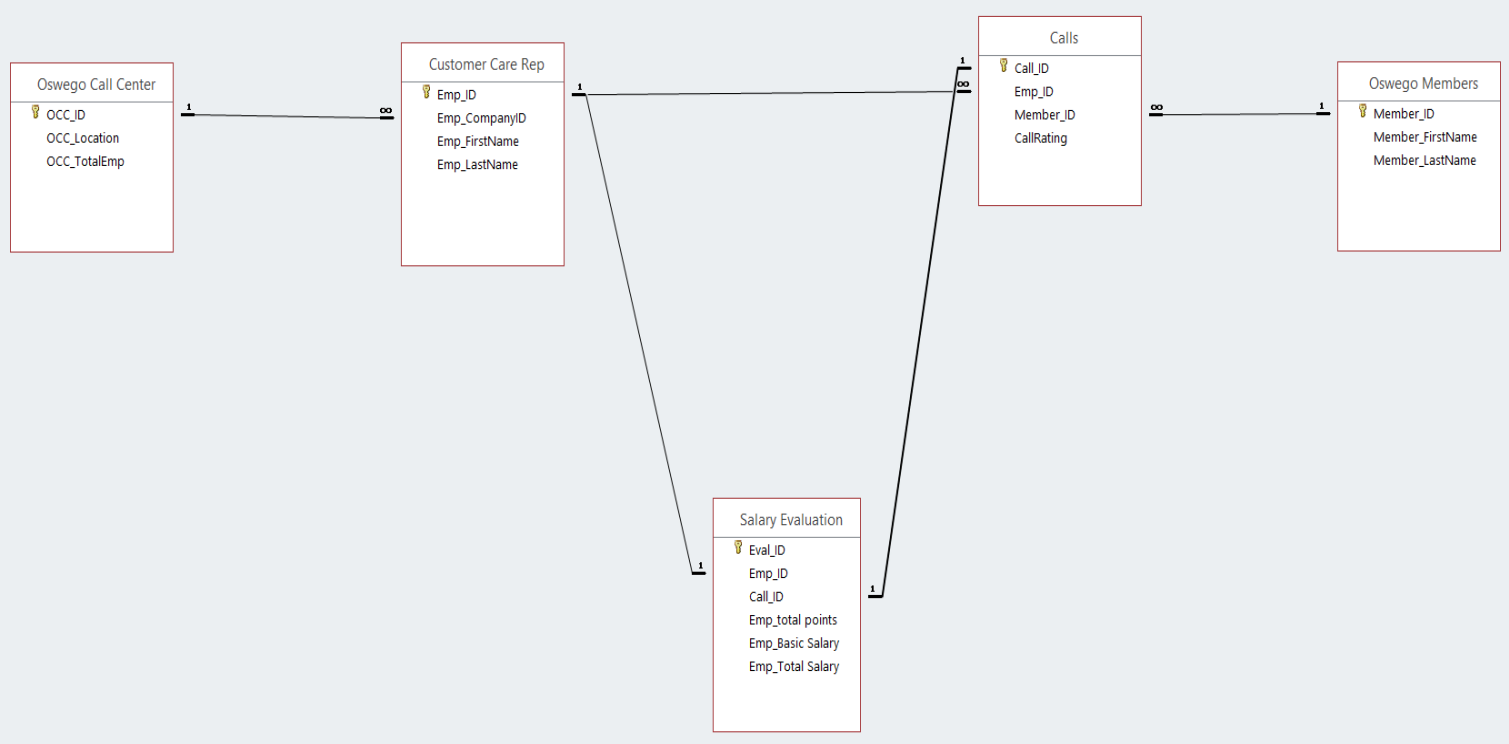

Problem 2: Create one ER diagram of a ternary relationship, e.g., doctors prescribes medicines for patients. But you can't use this doctor example in your report, and you have to create a different one that is reasonable by yourself. In each entity, you can specify only the primary key and foreign key fields without defining other non-key fields. Establish the cardinality of the relationship between entities. You also want to show the ER diagram in Visio.

- Ternary relationship example: Client assigns projects to a consultant
- Necessary Assumptions (Business Rules):
  - A client must give at least one assignment. Conversely, every assignment must come from one client
  - Each assignment must contain at least one assignment List. Conversely, multiple assignment list must be a part of only one assignment
  - One project must contain at least one assignment list. Conversely, multiple assignment list must be a part of only one project
  - One consultant may receive multiple projects. Conversely, one project can be handled by only one consultant

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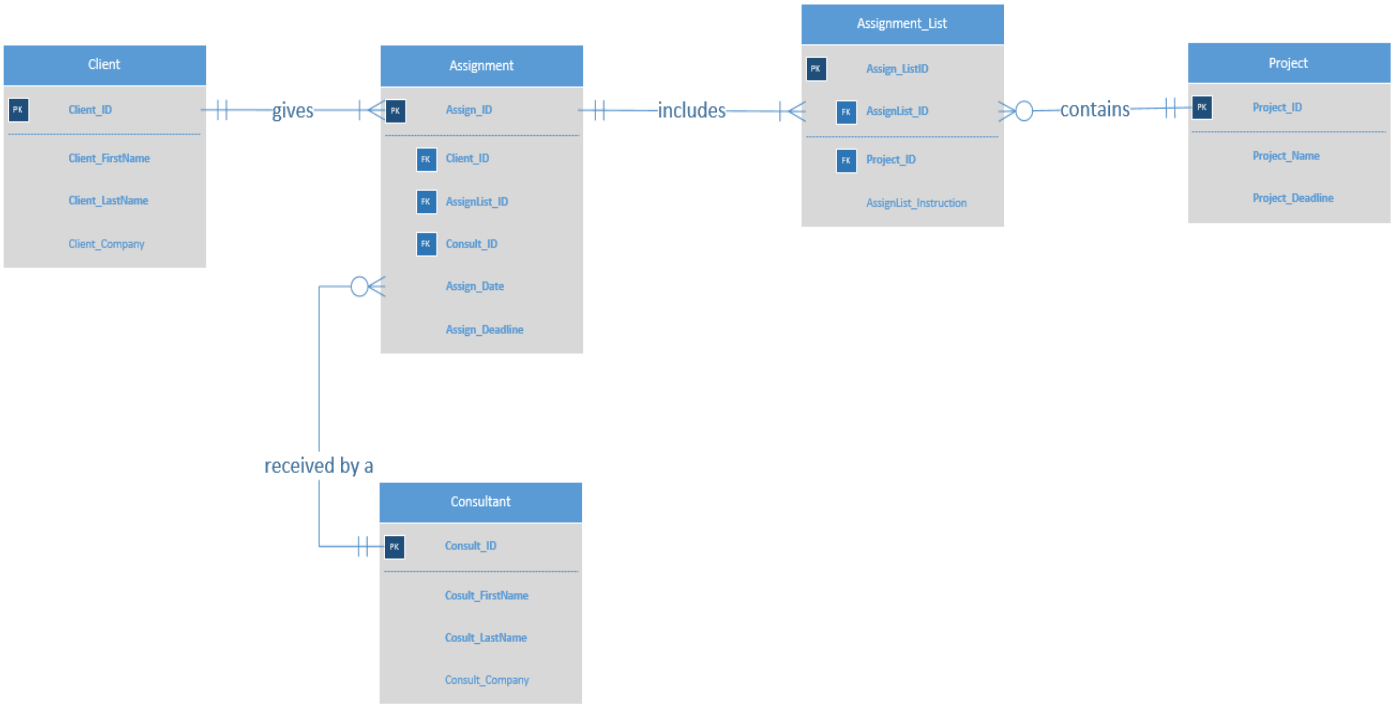

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