Milestone 1 Assignment

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Project Description

What is the domain of the application?
The domain of the project is a job/volunteer board that centers around advertising campus organizations and allowing students to apply for student club/organization positions that are posted by other students. Event logistics and volunteering opportunities are also included in the domain. We aim to centralize the search for campus opportunities.

What aspects of the domain are modeled by the database?
The database is a conceptual model designed to capture the interaction between student entities and club events at UBC. The database will be modeled based on the job postings authorized by AMS clubs.

Database Specification

What functionality will the database provide?
The database will allow students at any university to see and filter through club/organization openings and volunteer opportunities and apply to eligible positions. Students currently in leadership roles are allowed to post position openings and detail who/what they are looking for. Furthermore, each club/organization has its own information, student feedback, and alumni page so that applicants can see who and what it is like being a part of the organization. Students will also have their own profile pages which display their contact, their current/recent club positions, and other necessary information.

Application Platform

What platform will your project use and what is your expected application technology stack?
Our project will use a full-stack web development platform that includes PostgreSQL, Express.js, React, Next.js (PERN Stack). PostgreSQL is an open source object-relational database system that uses and extends the SQL language.

ER Diagram Notes

We have the following entities in our diagram:

- **Clubs:**
    - Attributes: clubID, name, description
    - Represents: Student club/team/organization

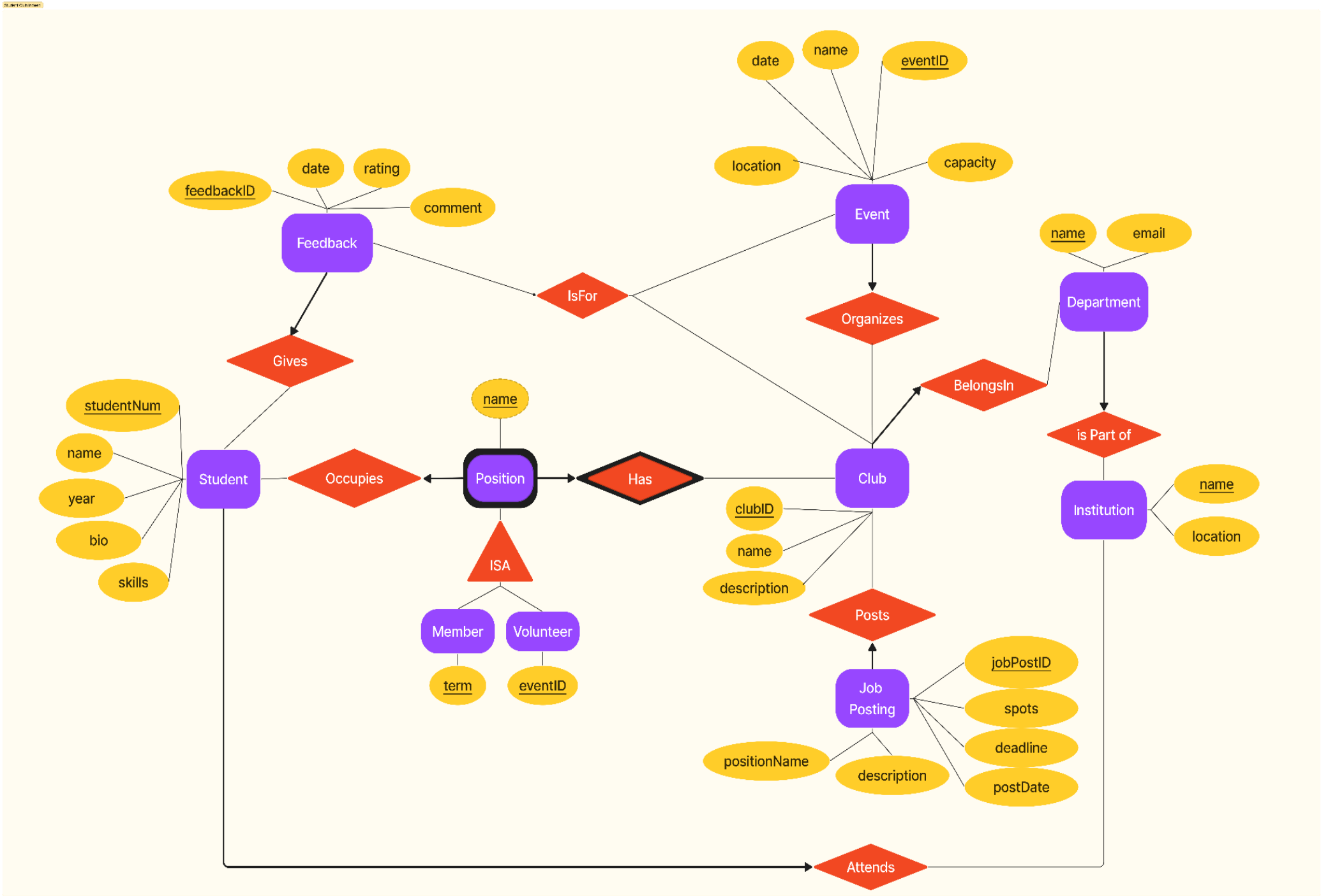
    - Relationships:
        - Has **Positions** (one-to-many)
            Every (one) club has many positions. Positions can be anything from photographer to an exec position. A position must have a club.
        - Posts **JobPosting** (one-to-many)
            Every (one) club can post many job postings. job postings can be for any future position for the club. A job posting must have a club.
        - Organizes **Event** (one-to-many)
            Every (one) club can organize many events. An event must have a club
        - Belongs In **Department** (many-to-one)
            Many clubs can have the same department. Department is the area that the club focuses on. I.e. Arts, Computer Hardware, Dance, etc.

- **Students:**
    - Attributes: studentNum, name, year, bio, skills
    - Represents: Students at an institution looking for clubs to join/volunteer for
    - Relationships:
        - Attends **Institution** (Many-to-one)
            Many students can attend the same institution. Represents what school the student goes to in case there is a position requirement set that the student must attend the same school.
        - Gives **Feedback** (one-to-many)
            A student can give multiple feedback reports on individual events and clubs. A feedback report must have a student.
        - Occupies **Position** (one-to-many)
            A student can have many positions, either in the same club (member and volunteer for ex.) or multiple clubs. A student does not need a position, but a position needs a student.
- **jobPosting:**
    - Attributes: jobPostID, positionName, description, postDate, deadline, spots
    - Represents: A posting made for a vacant position in a club. The Job Posting will create a new **position** entity with the student selected from the list of applicants.
    - Relationships:

        - **Club** Posts *JobPosting* (Many-to-one)
            Many postings can be made by clubs for various positions. JobPosting has necessary information relevant to the role.
- **Positions** (Weak Entity depending on Club and Student)**:**
    - Attributes: (Primary) <u>name</u>, (Foreign) <u>clubID</u>, (Foreign) <u>studentNum</u>, (ISA) <u>term</u>, (ISA) <u>eventID</u>,
    - ISA: Position can be a member role or a volunteer role. These are mutually exclusive.
    - Represents: Position represents a role within a club/team/organization. A club can have multiple of the same position (i.e. Co-execs, Accountants etc.) so a <u>studentNum</u> attached to that position is required. Additionally, 2 different clubs can have the same position (i.e. Treasurer) so a position is also dependent on the Club.
    - Relationships:
        - Has **Club** (Many-to-one)
            A position must belong to a club.
        - Is Occupied by **Student** (many-to-one)
            A student can give multiple positions, either in multiple different clubs or in the same club. A student won't have the same position twice during a period of time so positions at different points of time are differentiated by the <u>term</u> or <u>eventID</u> from the ISA.

- **Departments:**
    - Attributes: <u>name</u>, email
    - Represents: A department with a department contact in case you need to reach out to them
    - Relationships:
        - **Club** belongs to *Department* (one-to-many)
            Many clubs can have the same department. Department is the area that the club focuses on. I.e. Arts, Computer Hardware, Dance, etc.
        - IsPartOf **Institution** (many-to-one)
            An institution can have many departments.
- **Institution:**
    - Attributes: <u>name</u>, location
    - Represents: a school where the student is located at
    - Relationships:
        - **Department** isPartOf *Institution* (many-to-one)
            An institution can have many departments.

        - **Student** attends *Institution* (many-to-one)
            An institution can have many students.
- **Events:**
    - Attributes: <u>eventID</u>, name, date, location, capacity
    - Represents: The individual events that a club hosts
    - Relationships:
        - **Club** organizes *event* (one to many)
            A club can organize multiple events
        - **Feedback** isGivenFor *event* (many-to-one)
            A student can give feedback on any event.
- **Feedback:**
    - Attributes: <u>feedbackID</u>, date, rating, comment
    - Represents: The feedback reports given by students for clubs/events
    - Relationships:
        - **Student** Gives *feedback* (one-to-many)
            A student can give multiple feedback reports on individual events and clubs. A feedback report must have a student.
        - *Feedback* isGivenFor **event** (many-to-one)
            A student can give feedback on any event.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