MeetUp McGill Project

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Introduction to MeetUp McGill

- McGill University is interested in enhancing connectivity amongst its students and alumni network by implementing a platform similar to Meetup. This platform, MeetUp McGill, is designed to connect students based on their interests and to provide a dynamic space for organizing and attending events.

- McGill University, one of the world's top institutions, has a vibrant and diverse community representing over 150 countries. MeetUp McGill seeks to foster a sense of community, deepen connections, and allow students to engage in activities that bring them together, regardless of their location.

- By leveraging the successful model of Meetup, the university aims to provide a platform where students and alumni can connect over shared interests and engage in various activities, from social gatherings to professional networking events.

Project Overview

- The MeetUp McGill project aims to create a user-friendly platform for McGill students and alumni to connect with one another through shared interests and organized events. The platform draws inspiration from the popular Meetup website, allowing users to form groups, attend events, and engage in discussions that foster community building.

- The main objective of this project is to bridge the gap between McGill students and alumni, helping them stay connected, regardless of their location. It will enable McGill to strengthen its community and showcase the diversity and global reach of its students.

- The platform will also serve as a tool for event management, where organizers can plan, promote, and receive feedback on events. Additionally, it will provide insights into user engagement, helping McGill University analyze the success of its initiatives and improve its community-building efforts.

Functionalities and Business Rules

- The MeetUp McGill platform will mirror the functionalities of Meetup.com, providing several key features:

- 1. **Group Creation and Management**: Students and alumni can create and join interest-based groups. Groups will have categories, and users can search for groups that match their interests.

- 2. **Event Management**: Users can create, schedule, and promote events for their groups. The platform will track attendance, monitor RSVPs, and collect feedback on the events.

- 3. **User Profiles**: Each user will have a profile containing their name, program, hobbies, languages, graduation year, and contact information. These profiles will help connect users with similar interests.

- 4. **Reviews and Feedback**: After attending events, users can leave reviews and ratings to share their experiences. The platform will track likes and comments on reviews to measure their impact.

Entity-Relationship Diagram (ERD)

- The Entity-Relationship Diagram (ERD) for the MeetUp McGill platform represents the structure of the database and the relationships between various entities involved in the system. The key entities include:

- 1. **Student**: Stores details such as student ID, name, program, hobbies, languages, graduation year, email, country and contact information.

- 2. **Activity**: Represents events that can be hosted or attended, including information such as activity ID, name, duration, start time, location, and capacity.

- 3. **Group**: Defines interest-based groups that users can join, with details such as group ID, category, name, number of members, and area.

- 4. **RSVP**: Tracks user RSVPs to activities, including their status (e.g., confirmed, pending) and post-event attendance.

- 5. **Reviews**: Captures feedback from users who have attended events, including review text and rating.

Data Dictionary

- The Data Dictionary provides detailed descriptions of the entities and their attributes in the MeetUp McGill platform:

- 1. **Student**:
- - Attributes: studentid (INT, Primary Key), name (VARCHAR), program (VARCHAR), hobbies (VARCHAR), languages (VARCHAR), graduationyear (INT), email (VARCHAR), country (VARCHAR)

- 2. **Activity**:
- - Attributes: activityid (INT, Primary Key), activityname (VARCHAR), duration (INT), starttime (TIME), location (VARCHAR), capacity (INT)

Data Dictionary

- 3. **Group**:
- - Attributes: groupid (INT, Primary Key), category (VARCHAR), groupname (VARCHAR), nb_members (INT), area (VARCHAR)

- 4. **RSVP**:
- - Attributes: rsvpid (INT, Primary Key), studentid (INT, Foreign Key), activityid (INT, Foreign Key), rsvp_month (TIME), rsvp_status (VARCHAR), post_event_attendance (VARCHAR)

- 5. **Reviews**:
- - Attributes: review_ID (INT, Primary Key), review_text (VARCHAR), reviewRating (INT), nb_likes (INT)

Relational Schema

- The Relational Schema outlines the structure of the database tables and their relationships within the MeetUp McGill platform. Key relations include:

- 1. **Student**: (studentid, name, program, hobbies, languages, graduationyear, email, country)
  Primary Key: studentid
- 2. **Activity**: (activityid, activityname, duration, starttime, location, capacity, groupid, studentid)
  Primary Key: activityid
  Foreign Key: groupid references Group(groupid)
  Foreign Key: studentid references Student(studentid)
- 3. **Group**: (groupid, category, groupname, nb_members, area)
  Primary Key: groupid
- 4. **RSVP**: (rsvpid, studentid, activityid, rsvp_month, post_event_attendance, rsvp_status)
  Primary Key: rsvpid
  Foreign Key: studentid references Student(studentid)
  Foreign Key: activityid references Activity(activityid)
- 5. **Reviews**: (review_ID, review_text, reviewRating, nb_likes, rsvpid)
  Primary Key: review_ID
  Foreign Key: rsvpid references RSVP(rsvpid)

Key Queries and Reports

- The MeetUp McGill platform will utilize various queries to generate reports and analyze data. Some key queries include:

- 1. **Monitor Group Membership Growth**:
  Purpose: Track the growth of groups by counting the number of members.
  Query: SELECT Group.groupname, COUNT(Membership.studentid) AS member_count FROM Group LEFT JOIN Membership ON Group.groupid = Membership.groupid GROUP BY Group.groupid ORDER BY member_count DESC;

- 2. **Identify Underbooked Activities**:
  Purpose: Identify activities with low RSVP rates for additional promotion.

- 3. **Analyze Feedback for Quality Improvement**:
  Purpose: Calculate the average rating and number of reviews for activities.

- 4. **Track RSVP Trends Over Time**:
  Purpose: Identify peak periods of engagement by tracking RSVP trends.

- 5. **Identify High-Value Users**:
  Purpose: Identify active users who participate frequently and leave valuable feedback.