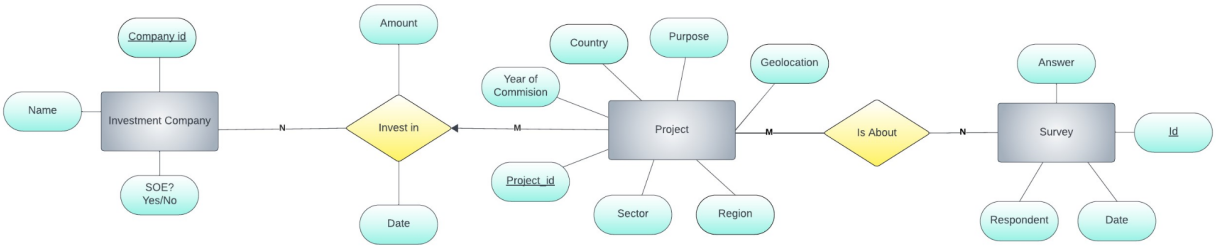
Databases Group 05: Phase 2

## ER Model



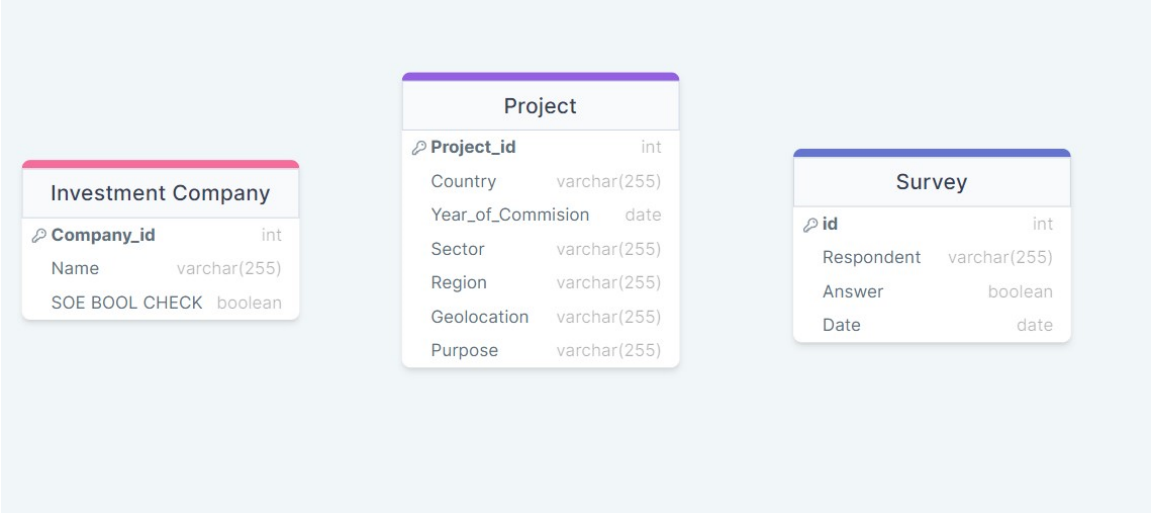

## Revision

In our revision, we decided to remove the “Investment” entity. This is because after looking at the data, we came to the conclusion that an investment company is not able to invest in a project multiple times. Outside of that clarification, it seems that our initial ER Diagram accurately represents relationships among entities.

## Relational Schema.

```
CREATE TABLE InvestmentCompany (
    Company_id INT,
    Name CHAR(255),
    SOE BOOL,
    PRIMARY KEY(Company_id))

CREATE TABLE Invest_In (
    Company_id INT,
    Project_id INT,
    Amount INT,
    Date DATE,
    PRIMARY KEY(Project_id),
    FOREIGN KEY(Company_id) REFERENCES InvestmentCompany,
    FOREIGN KEY(Project_id) REFERENCES Project)

CREATE TABLE Project (
    Project_id INT,
    Country CHAR(255),
    Year_of_Commission DATE,
    Purpose CHAR(255),
    Geolocation CHAR(255),
    Sector CHAR(255),
    Region CHAR(255)
    PRIMARY KEY(Project_id))

CREATE TABLE Is_About (
    Project_id INT,
    id INT,
    PRIMARY KEY(Project_id, id),
    FOREIGN KEY(Project_id) REFERENCES Project,
    FOREIGN KEY(id))

CREATE TABLE Survey (
    id INT,
```

```
Respondent CHAR(255),
Answer BOOL,
Date DATE,
PRIMARY KEY(id))
```




Roles

Micah: Start implementing the web application, to the point that it should be able to perform the example SQL queries

Neville: Complete the conversion of the ER schema into the relational schema, ensuring that it is in a normal form

Neal: Devise (preliminary) example SQL queries that showcase the different ways that the user would interact with your database

Kedar: Create and populate the database and the tables needed by our project

List of Software we Installed/ Configured

PostgreSQL, Git, NodeJS

First we had to install PostgreSQL on one of our machines using the Homebrew package manager. The next step was to start up a local instance to create a database and initialize a table. We persisted the database to the disk as a .sql file.

Additionally, we installed NodeJS to load in SQL files and start making queries.

List of Open Questions

1. How important is the geolocation data going to be in terms of interacting with the application?

2. How can we query geolocation data (similarity)?
3. What is the survey going to look like? How are responses recorded?