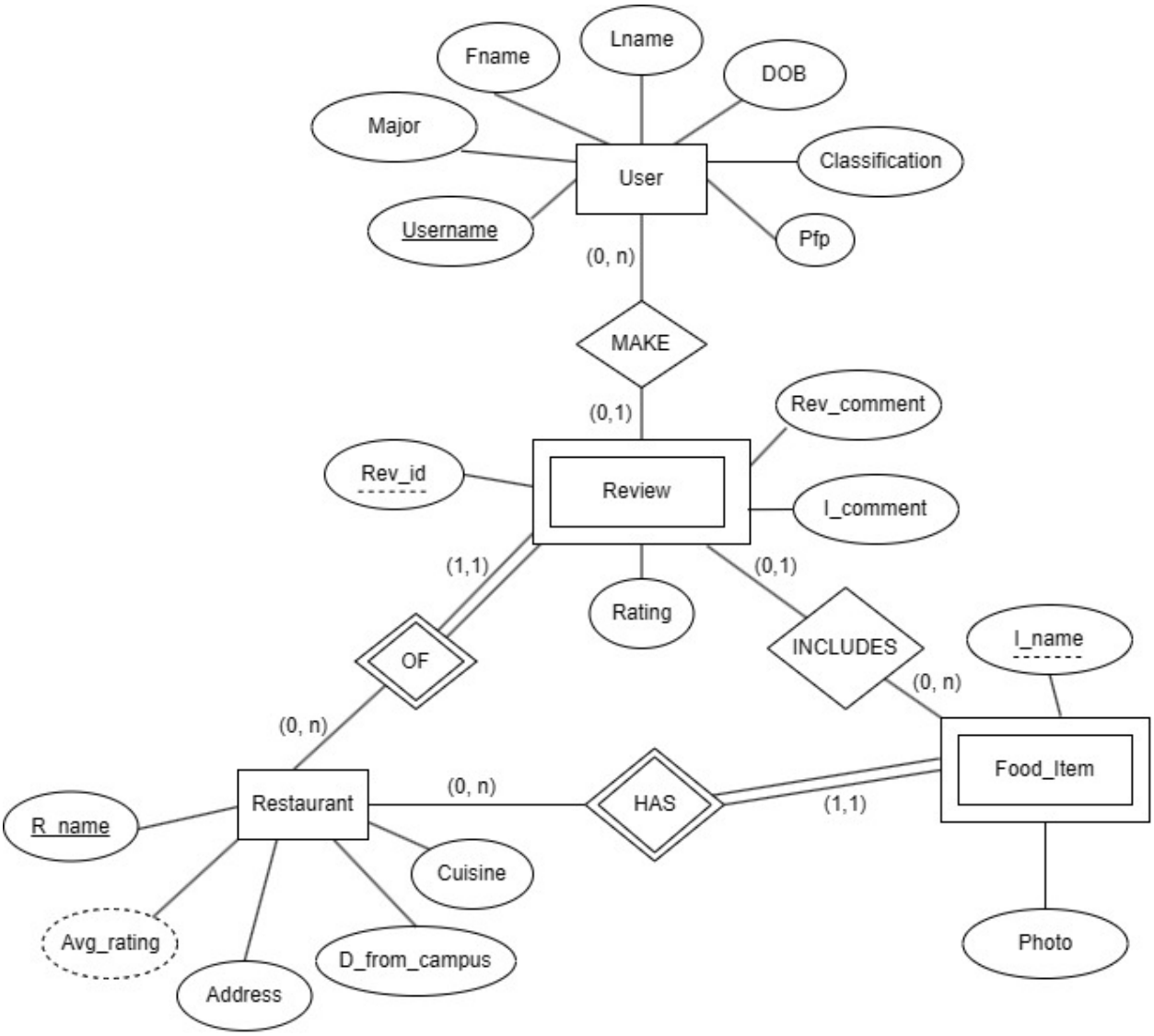
Phase 2 Report

ERD (Entity Relation Diagram)



Database Schema Report

Part 1 – Table Overviews

- **User**
  - Username
    - Primary Key
    - Varchar(20)
    - Not Null
    - A unique identifier for a user which is created by the user when the account is first initialized.
  - Major
    - Varchar(40)
    - Can be Null
    - The user's field of study in college. This is optional; users do not have to list their majors. This is for social purposes.
  - Fname
    - Varchar(20)
    - Not Null
    - The user's first name. This is for social purposes and to help other users recognize this user by name.
  - Lname
    - Varchar(20)
    - Can be Null
    - The user's last name. This is optional if the user does not wish to share their full name. This is for social purposes and to help other users identify this user by name.
  - DOB
    - Date
    - Not Null
    - The user's birth date (year, month, and day). This is used to verify that the user is old enough to be reviewing restaurants.
  - Classification
    - Varchar(10)
    - Can be Null
    - The user's classification as a college student. For example: freshman, sophomore, junior, senior, masters, PhD. This is optional if the user does not wish to share it. This is for social purposes.
  - PFP
    - Varchar(200)
    - Not Null
    - Default Value: Link to image of a silhouette of a person

        - This is the user's profile picture. It is used for social purposes. A user does not have to add a profile picture, but if they do not, the default of a silhouette will be displayed.

- **Review**
    - Res_name
        - Foreign Key (to Res_name in Restaurant Relation), Partial Key (Makes Primary Key with Rev_id)
        - Varchar(50)
        - Not Null
        - On Delete of PK: Cascade
        - The name of the restaurant that the review is about. This is used as a partial key for the review entity as the review entity is a weak entity defined by its relationship to a restaurant. Helps users determine which restaurant a review corresponds to and which restaurants suit their needs based on the contents of the reviews.
    - Rev_id
        - Partial Key (Makes Primary Key when combined with Res_name)
        - Int
        - Not Null
        - This is used to uniquely identify a review for a given restaurant. Each review of the same restaurant will have a different Rev_id which is generated.
    - Rating
        - Smallint
        - Not Null
        - Constraint: Must be between 1 and 5 inclusive
        - The user's opinion of the restaurant expressed numerically. 1 is the lowest and 5 is the highest. The purpose of this is for users to share how much they liked a restaurant and for other users to decide if they would like to go.
    - Rev_comment
        - Varchar(500)
        - Can be Null
        - A user's commentary on their opinion of the restaurant. This is optional. That is, a user can leave a rating without leaving a comment. This is for users to better express their opinions and better understand what the restaurant experience is like.
    - I_comment
        - Varchar(500)
        - Can be Null

        - A user's commentary on their opinion of their favorite item at the restaurant. This is optional. A user does not have to list a favorite item. Even if they do, they do not have to comment on the item. This is for users to better express their opinions and better understand what the item is like.
    - Username
        - Foreign Key (to Username in User relation)
        - Varchar(20)
        - Can be Null (treat all null users as a single user with multiple reviews)
        - On Delete of PK: Cascade (unless NULL in which case Restrict the deletion)
    - Fav_item
        - Foreign Key (to I_name in Food_Item relation)
        - Varchar(20)
        - Can be Null
        - On Delete of PK: Set null (it is okay to leave a review without a fav_item is the user wants to)
- **Restaurant**
    - Res_name
        - Primary Key
        - Varchar(50)
        - Not Null
        - The name a restaurant is known by. Used to identify a restaurant. This is how users know which restaurant others are talking about.
    - Cuisine
        - Varchar(20)
        - Can be Null
        - The type of food that a restaurant serves. For example, Asian, Italian, Mexican, etc. This is included so users can find restaurants that serve types of food that they are craving.
    - D_from_campus
        - Varchar(20)
        - Can be Null if Address is null
        - Derived attribute; we will calculate the value of the distance of the restaurant from campus by utilizing the school's address (known) and the actual address of the restaurant. This helps users find the nearest restaurant to campus.
    - Address
        - Varchar(100)
        - Can be null

        - We need the address attribute of the restaurant for informing users of the exact location and also for deriving the distance from campus.
- **Food_Item**
    - Res_name
        - Partial Key (Primary Key together with I_name), Foreign Key (to Res_name attribute in Restaurant table)
        - Varchar(50)
        - Not Null
        - On Delete of PK: Cascade
        - The name of the restaurant that the food item belongs to. This is how users know which restaurants serve which foods.
    - I_name
        - Partial Key (Primary Key together with Res_name)
        - Varchar(30)
        - Not Null
        - The name of a food item served at a restaurant. This is included so users can share their favorite food items in reviews and see what is served at different restaurants to decide where to eat.
    - Photo
        - Varchar(200)
        - Can be Null
        - A picture of the food item served at the restaurant. This is only present in the database for some food items. Others have not been photographed. This is so users can see if a food item looks appetizing.

Database Schema Report

Part 2 - Mappings