Data Requirements

Student: Students require their email, name, team and tutor to be stored. This allows for the identification of each student. Their tutor is required to allow teams to be created based on the tutor they belong to and to use the tutor's office in the route for that group. Storing the team allows for the game keeper to be able to view which students are in a particular group. Student's emails can be used for verification purposes to allow only exeter students to register an account and to prevent students from being able to access the gamekeeper dashboard. A boolean is stored to denote whether the student has been verified or not.

Tutor: Email and name should be stored as a way to identify the tutors and to verify their accounts. This grants access to the gamekeeper dashboard for staff only. The office location should be stored so that the student's route can be customised based on their tutor's office. A boolean is stored to denote whether the tutor has been verified or not.

Teams: A team should have a team name and store the route id for the current route the group is completing. The tutor_id is stored so that the team can be mainly under the supervision of that tutor. Additionally, a student id is stored to denote who the team leader of the group is and therefore who controls the flow of the game on their device.

Locations: The location has a name and a generic clue which describes the location. An image of the location is also stored as a url.

Offices: The name of the office is stored (maybe as a room number or room name if it has one) that provides description to the specific room. The location ID should also be stored as a foreign key so that a specific location is attached to each office.

Routes: A route should have a unique identifier (route ID) and the route name. The route information is stored within route_location_bridge

Route_Location_Bridge: The primary key is a composite key of the location_id, the route_id and the sequence_order that the location comes in on that particular route. Usually multiple locations will be stored for the same route as different rows. This table also holds the question_id of the question that has been assigned to that location for that particular route. This allows for gamekeepers to choose from multiple questions for each location when creating a new route.

Score: The route_id, route_name and team_id must be stored so that it can be identified what scores were achieved by which team on any given route. This will also allow for a leaderboard to be route specific. The score value must also be stored to show an order.

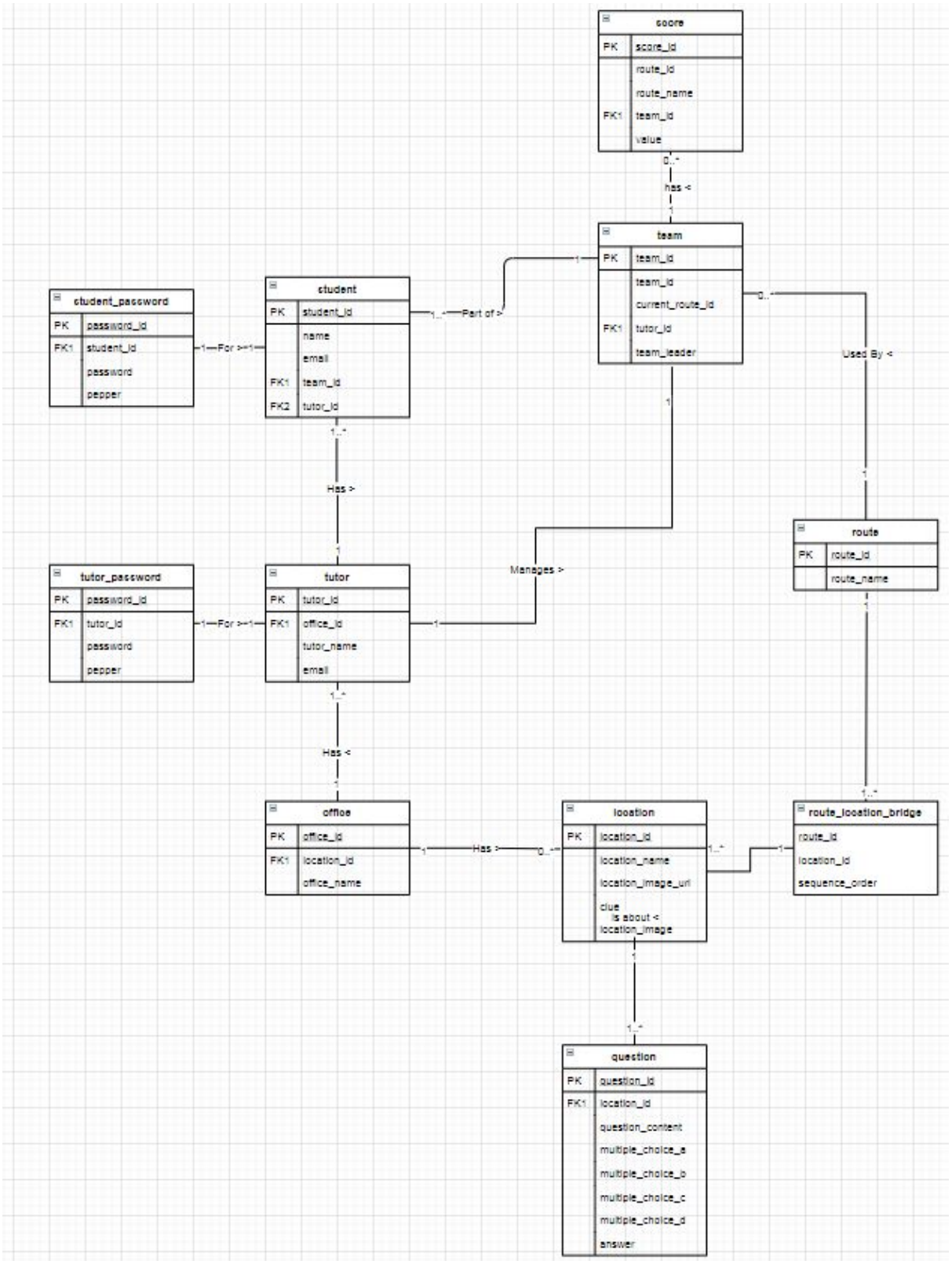
Question: The content of the question must be stored here as different columns - this includes the question itself, the multiple choice answers and the correct answer for the given question. The location_id must also be stored so that the question is attached to a specific location.

Student_Password: The student password is stored in a separate table with the related student's id as a foreign key. It is safer to keep the passwords in a separate table along with a pepper as this could be encrypted for an extra layer of security.

Tutor_Password: The same applies as above but for tutors.

These basic data requirements cover all the necessary users as mentioned in the specification.

ER Diagram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multiple_choice_c
multiple_choice_d
answer