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Database Design in 3NF

curriculum (id, curric_name, min_rating, max_rating, description, active)

camp (id, session, start_date, end_date, num_enrolled, max_enroll, name, price, num_instructors, active, location_id, curriculum_id)

location (id, name, max_capacity, street, zip, city, state, active)

registration (id, balance, camp_id, student_id)

student (id, fname, lname, uscf_rating, points, age, balance, active, family_id)

camp-instructor (id, camp_id, instructor_id)

instructor (id, fname, lname, phone, email, bio, active)

user (id, username, password, role, active)

family (id, emerg_phone, emerg_email, emerg_contact, active)

parent (id, fname, lname)

Underlines:
Solid underlined fields are primary keys;
Dotted underlined fields are foreign keys;
Double underlined fields are composite keys that are both primary and foreign keys.

Database Design Notes:

1. Having zip code in the locations table creates a transitive dependency, but given the limited size of the system, there isn't a need to normalize and move zip code and primary city & state into its own table.

2. Although parents and families are closely related, the tables are separate in order to represent the fact that a parent is a user, whereas a family is not.

3. The balance attribute in the registration entity keeps track of whether the student puts in a deposit or pays in full. A student's balance is associated with registration because they can be registered in multiple camps, also their method of payment can be different for each. The balance attribute in the student entity keeps track of their total outstanding balances across all their registrations.

4. A parent can be associated with zero families if they create an account but exit before they create a family. Similarly, a family can include zero students if no students are added yet.