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INTER-COLLEGE COMPETITION
DATABASE MANAGEMENT SYSTEM

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INTRODUCTION:

Inter-college competitions are a great way for students to showcase their talents, engage in healthy competition and develop essential skills such as teamwork and leadership. However, it can be challenging for students to keep track of all the inter-college competitions in various fields and categories. To address this issue, a database project can be developed to provide students with a comprehensive and up-to-date resource of inter-college competitions.

Entities involved:
The database includes following entities:

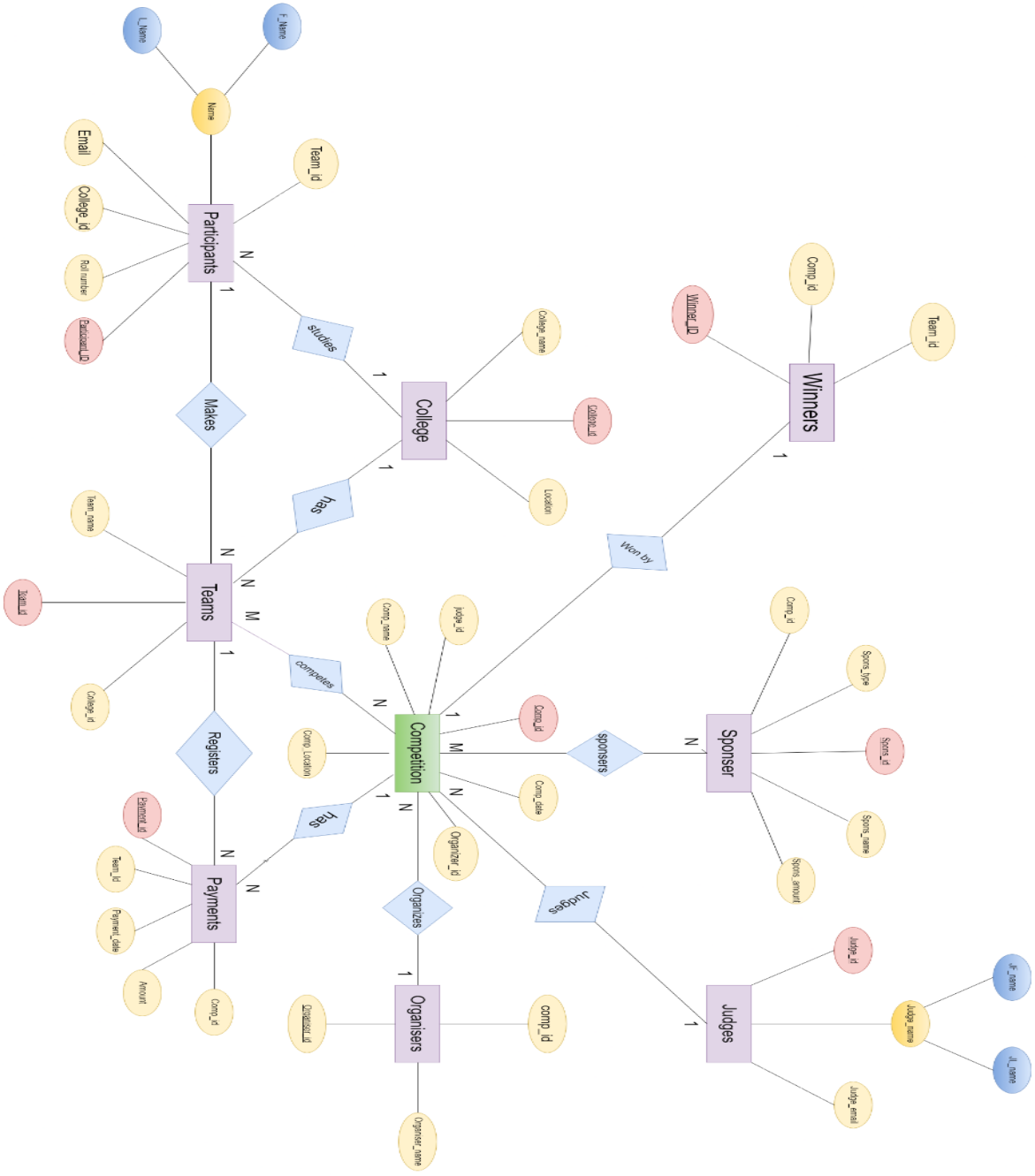
1. Competition
2. College
3. Teams
4. Participants
5. Payments
6. Organizers
7. Judges
8. Sponsor
9. Winner

Significance of each Entity:

1. **Participants**: This entity represents the individuals who will be participating in the competitions. The important attributes of this entity are participant_id, name, email, phone, and address.
2. **College**: This entity represents the colleges that will be participating in the competitions. The important attributes of this entity are college_id, name, city, and state.
3. **Competitions**: This entity represents the various competitions that will be held. The important attributes of this entity are competition_id, name, start_date, end_date, and location.
4. **Teams**: This entity represents the teams that will be participating in the competitions. The important attributes of this entity are team_id, name, captain, and coach.
5. **Sponsors**: This entity represents the organizations that will be sponsoring the competitions. The important attributes of this entity are sponsor_id, name, email, phone, and address.
6. **Judges**: This entity represents the individuals who will be judging the competitions. The important attributes of this entity are judge_id, name, email, phone, and address.
7. **Organizers**: This entity represents the individuals or organizations responsible for organizing the competitions. The important attributes of this entity are organizer_id, name, email, phone, and address.
8. **Payments**: This entity represents the payments made by the teams to participate in the competitions. The important attributes of this entity are payment_id, amount, date, and status.
9. **Winners**: This entity represents the winning teams/participants in the competitions. The important attributes of this entity are winner_id, category, and prize.

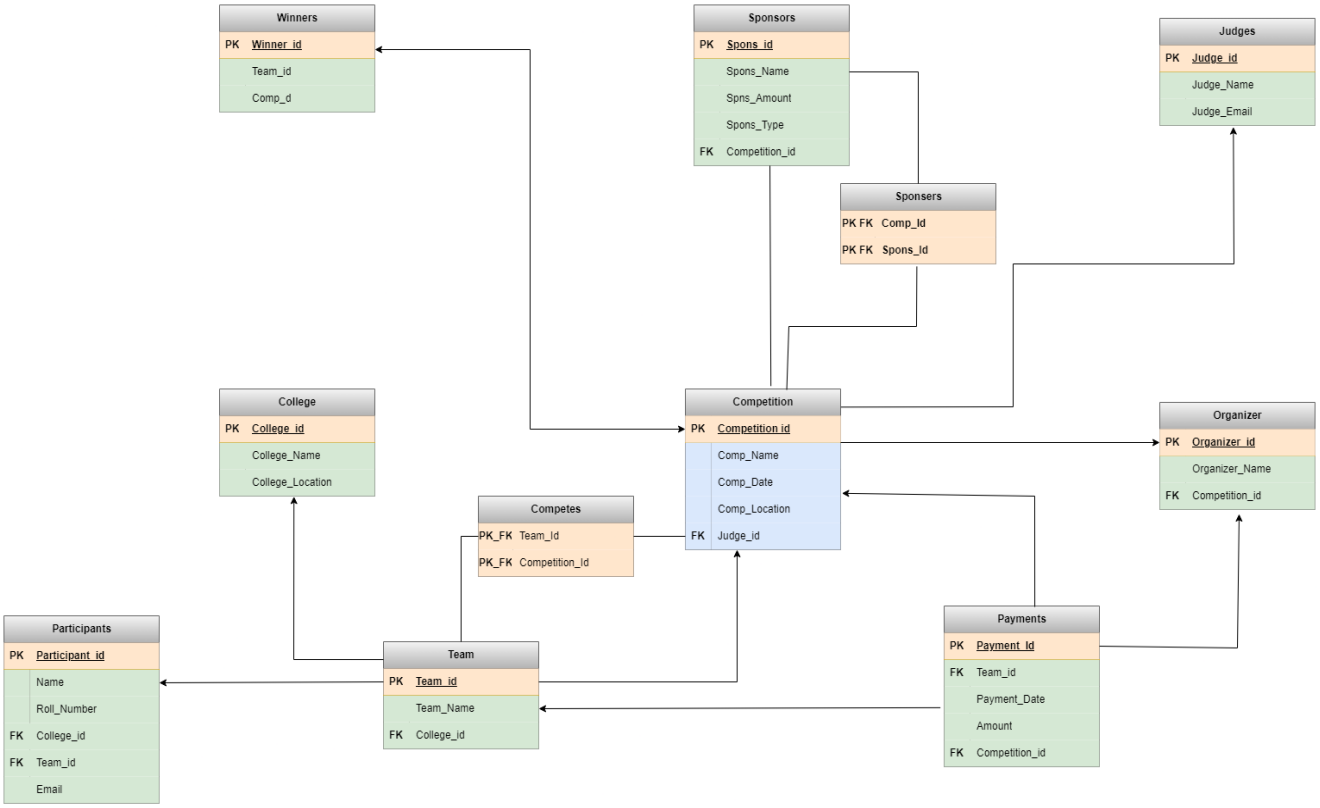
*Each entity has a unique identifier attribute, which is used as the primary key for that entity.

ER MODEL


Participants
Teams
College
Competition
Sponser
Winners
Judges
Payments
Organisers
Makes
Studies
Has
Competes
Registers
Sponsers
Won by
Judges
Organizes
Has
Name
F_Name
L_Name
Email
College_id
Roll number
Participant_ID
Team_id
Team_name
Team_id
College_id
College_name
College_id
Location
Comp_name
Comp_id
Comp_Location
Comp_date
Judge_id
Organizer_id
Comp_id
Sponsor_id
Sponsor_name
Sponsor_type
Sponsor_amount
Winner_ID
Comp_id
Team_id
Judge_id
Judge_name
Judge_email
JF_name
JL_name
Payment_id
Team_id
Payment_date
Amount
Comp_id
Organiser_id
comp_id
Organiser_name

Relational Schema :

The relational schema for the ER model described earlier could be -
College(college_id(PK), name, city, state)
Competition(competition_id(PK), name, start_date, end_date, location, prize_money, organizer_id(FK references Organizer(organizer_id)))
Organizer(organizer_id(PK), name, email, phone, address)
Judge(judge_id(PK), name, email, phone, address)
Participant(participant_id(PK), name, email, phone, address, college_id(FK references College(college_id)))
Team(team_id(PK), name, competition_id(FK references Competition(competition_id)))
Payment(payment_id(PK), registration_fee, payment_date, participant_id(FK references Participant(participant_id)), team_id(FK references Team(team_id)))
Sponsorship(sponsorship_id(PK), amount, payment_date, competition_id(FK references Competition(competition_id)))
Winners(competition_id(PK, FK references Competition(competition_id)), participant_id(PK, FK references



Relations :

Participants and Team: One-to-Many relationship where each participant can belong to only one team, but each team can have multiple participants. The Team table has a foreign key CollegeId referencing the College table.

Team and Competition: Many-to-Many relationship where each team can participate in multiple competitions, and each competition can have multiple teams. The relationship is implemented through a bridge table called TeamCompetition.

Competition and Judge: Many-to-one relationship where each competition can have a judge, and each judge can judge multiple competitions. The relationship is implemented through a bridge table called CompetitionJudge.

Competition and Organizer: Many-to-one relationship where each competition can have only one organizer, but each organizer can organize multiple competitions. The Organizer table has a foreign key CollegeId referencing the College table.

Team and Payment: One-to-Many relationship where each team can have multiple payments, but each payment is associated with only one team. The Payment table has foreign key columns TeamId and CompetitionId referencing the Team and Competition tables, respectively.

Competition and Sponsor: Many-to-many where each competition can have multiple sponsors and sponsor table can have competition id as foreign key.

Competition and Payments : One-to-Many where each competition can have multiple payments of various teams and the payment table will have all the relevant information.