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Relations:

Part 2 + Part 3

Create Two Sets of Relations based off the ErdPlus Diagram

1.

Person(ID, fname, lname, email, phoneNumber, gender)

Functional Dependencies

ID → fname

ID → lname

ID → email

ID → phoneNumber

ID → gender

Email → fname, lname, phoneNumber, gender

It's possible for multiple people to have the same email address so this is not a primary key.

This is not in BCNF form so we must decompose + make new relations

email_info(email, fname, lname, phoneNumber, gender)

Person(ID, fname, lname)

2.

Faculty(facultyID, tenured, term_begin, term_ended)

Has a one-to-many relationship with Degree Relation (so would Faculty have a foreign id called degreeID?)

Functional Dependencies

facultyID → tenured, term_begin, term_ended

Already in BCNF Form

What does your POD diagram depict?

Basically, our POD diagram depicts the entity relationships between staff and faculty under the Provost. It is connecting the staff and faculty to their potential degrees and status within the college. We are creating a framework to track the movements of a faculty member through the tenure process. We have included staff members because they are the Provosts responsibility. With more thought, we hope to include aspects of the hiring process to help the Provost manage the faculty/staff in a more efficient way. Going forward, we hope to venture into the committee dilemma of the Provost operations.

What queries do you expect will be typical for your database and how will your design facilitate them?

We are looking to help with the tenure process and hope to expand on assisting with the committee process.

- How long has this professor been employed at Westmont?
- What is the level of degree this professor has?
- Does the professor have good research experience? (we will expand on this with a research relation)
- Where did the professor graduate from?
- How long has the professor been teaching?

How will your design facilitate these queries?

Our design will allow the user to ask questions regarding the professors past degrees and universities graduated from. The user will be able to navigate through different database schemas that provide information on the tenure process, the degrees received process, as well as the committee process. We hope to add relations regarding the committee process to further help the provost make decisions efficiently and effectively.

Other working relations:

Degree(degreeID, degreeType, yearGraduated)

Rank(instructor, professor, associateProfessor, assistantProfessor)

Degree(degreeType, yearGraduated)

University(universityID, highestLevel, christianAffiliation)

