

CSE 5330 PROJECT 1

PART - 1

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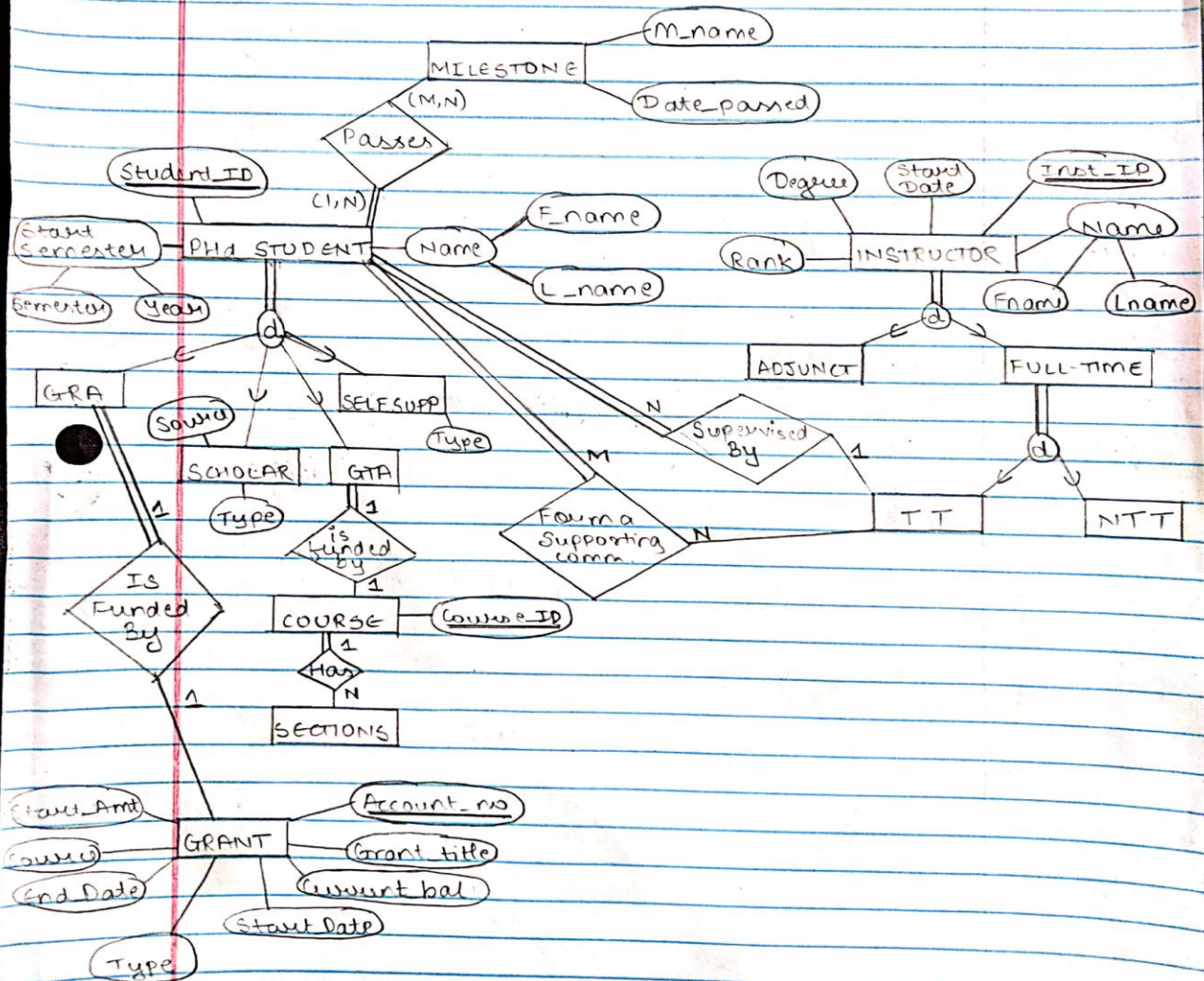
Description

- PhD_STUDENT, INSTRUCTOR, GRANT, MILESTONE, COURSE and SECTIONS are the primary entities with their respective attributes.
- PhD_STUDENT is a super-class which is divided into GRA, SCHOLAR, GTA and SELF_SUPP with disjoint constraints.
- Funding for GRA is a 1-1 relation with GRANT. Funding for GTA is a 1-1 relation with COURSE which has 1-N SECTIONS.
- We have added Course_ID as a primary attribute for COURSE in order to keep track of the COURSE and the SECTIONS wrt their relationship with GTA.
- INSTRUCTOR is a super-class which is divided into ADJUNCT and FULL-TIME with the disjoint constraint. The FULL-TIME entity is further divided into TT(Tenure track) and NTT(Non Tenure Track).
- Every PhD_STUDENT is supervised by 1 TT INSTRUCTOR which is shown by N-1 relation.
- Every PhD_STUDENT forms a supervising committee of TT INSTRUCTOR which is shown by M-N relation.
- Every PhD_STUDENT passes multiple MILESTONE which is represented by a min-max relationship.

EER Diagram

INITIAL CONCEPT

① Conceptual schema database design using EER model.



Relational Schema – Tabular Form

RELATIONAL SCHEMA – TABULAR FORM

MILESTONE

<u>Student_ID</u>	<u>M_name</u>	Date	Passed
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Phd-STUDENT

<u>Student_ID</u>	Semester	Year	Fname	Lname	Superv_ID
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INSTRUCTOR

<u>Inst-ID</u>	Fname	Lname	Start Date	Degree	Rank	Adj_Flag
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GRANT

<u>Account_no</u>	Title	CourseID	StartDate	EndDate	Type	Source	St_Amt
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GRA

<u>Student_ID</u>	<u>Grant_ID</u>
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SCHOLAR

<u>Student_ID</u>	<u>Source</u>	Type
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GTA

<u>Student_ID</u>	<u>Source_ID</u>	Section
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SELF_SUPP

<u>Student_ID</u>	Type
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FULL-TIME

<u>Inst-ID</u>	<u>FT_Flag</u>	NTT_Flag
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COMMITTEE

<u>Student_ID</u>	<u>Inst-ID</u>
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