Roll No. :- COMPTEB1449
Name :- Paarth Kothari
PRN :- 72018337F

Assignment No. 1

Title:- ER modelling and Normalization

Problem Statement:- A university registrar's office maintains data about the following entities:

1. courses, including number, title, credits, syllabus, and prerequisites;
2. course offerings, including course number, year, semester, section number, instructor(s), timings, and classroom;
3. students, including student-id, name, and program;
4. instructors, including identification number, name, department, and title.

Further, the enrollment of students in courses and grades awarded to students in each course they are enrolled for must be appropriately modelled.

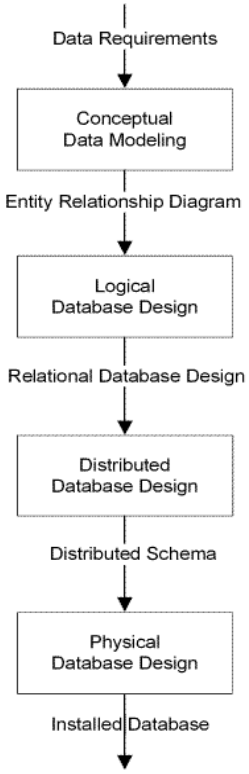
Construct an E-R diagram for the registrar's of-ce. Document all assumptions that you make about the mapping constraints.

Objective:- To learn about how to create an ER Diagram.

Theory:- Entity relationship diagram (ERD) is one of the most widely used techniques for data modelling. An ERD developed during the conceptual data modelling phase of the database development process is generally transformed and enhanced through normalization principles during the logical database design phase. This paper suggests the inclusion of normalization during ERD development. Application of normalization during ERD development allows for more robust requirement analysis.

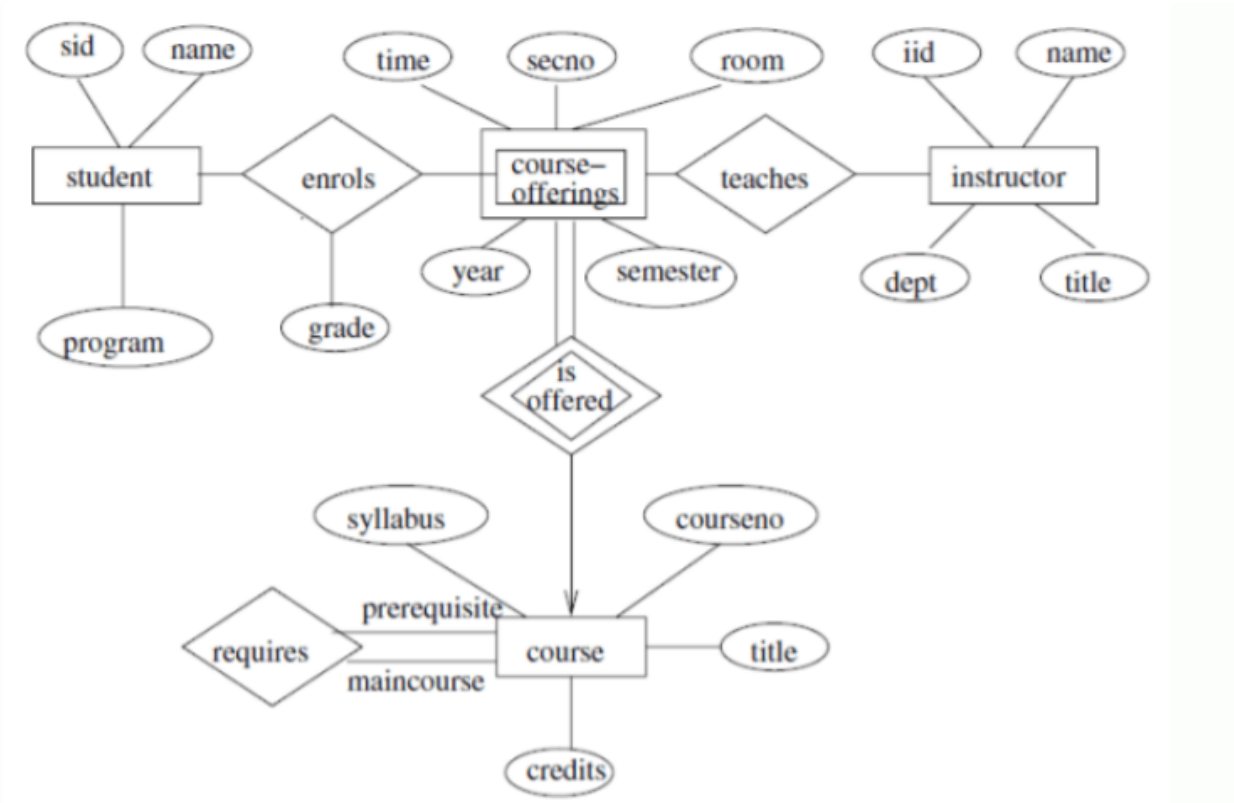
The entity-relationship diagram (ERD) is one of the most widely used techniques for data modelling. Data modelling is an essential component of database design and development. It provides a means to analyze business requirements so as to standardize organizational vocabulary, enforce business rules, and ensure adequate data quality.

Data modelling is performed during the initial phases of the database development process (also referred to as the database life cycle) During this process, the top two phases are concerned with the information content of the database, while the last two phases are concerned with the implementation of the database on some commercial DBMS.



Outcome:- After completing this assignment, students will be able to learn about ER Diagram, Modelling and Normalization.

Output:-



E-R diagram for a university.

Conclusion:- Hence we successfully executed and created the ER Diagram for the Case study of the University's registrar office.