CS 207: Applied Database Practicum
In-Class Activity 7: Introduction to ER Diagrams, 7th October, 2019

In this activity, you will be learning to create ER Diagrams.

Q1. Consider the following information about a university database:
1. Professors have an SSN, a name, an age, a rank, and a research specialty. (Assign Primary key to SSN)
2. Projects have a project number, a sponsor name (e.g., DST), a starting date, an ending date, and a budget. (Assign primary key to project number)
3. Graduate students have an SSN, a name, an age, and a degree program (e.g., M.S. or Ph.D.) (Assign Primary key to SSN)
4. Each project is managed by one professor (known as the project's principal investigator).
5. Each project is worked on by one or more professors (known as the project's co-investigators).
6. Professors can manage and/or work on multiple projects.
7. Each project is worked on by one or more graduate students (known as the research assistants).
8. Graduate students can work on multiple projects,
9. Departments have a department number, a department name, and a main office.
10. Departments have a professor (known as the chairman) who runs the department.
11. Professor's work in one or more departments, and for each department that they work in, a time percentage is associated with their job.
12. Graduate students have one major department in which they are working on their degree.

Design and draw an ER diagram that captures the information about the university. Use only the basic ER model here; that is, entities, relationships, and attributes. Be sure to indicate any key and participation constraints. Please specify the Primary Key and Foreign Key Constraints.