

Question1:

Use an Entity-Relationship diagram to describe the information needs of the following engineering project:

- Each engineer works on a number of projects. For every engineer a record is kept of his/her number, first and last name, title, salary, date of birth and age.
- For every project a record is kept of its number, name, budget and location. Additionally, the job each engineer has on a particular project and the amount of time he/she spent on the project is noted.
- Clients contract these projects. The clients name, address and phone number must be recorded. The contract date (the date at which the client signs the contract for a specific project) is also must recorded.
- Each project use at least one or more machines. The number, name and the date the machine is needed for the specific project is recorded.

Include any attributes you think should be represented (state why). State any assumptions you have made.

Question2:

Draw an ER diagram for each of the following situations.

- A college has number of courses in its plan. Each course may have one or more other courses as prerequisites, or may have no prerequisites.
- A teacher teaches, at most, one course. A course is taught by exactly one lecturer.
- A vehicle may be car or truck type. Truck is assigned to exactly one project