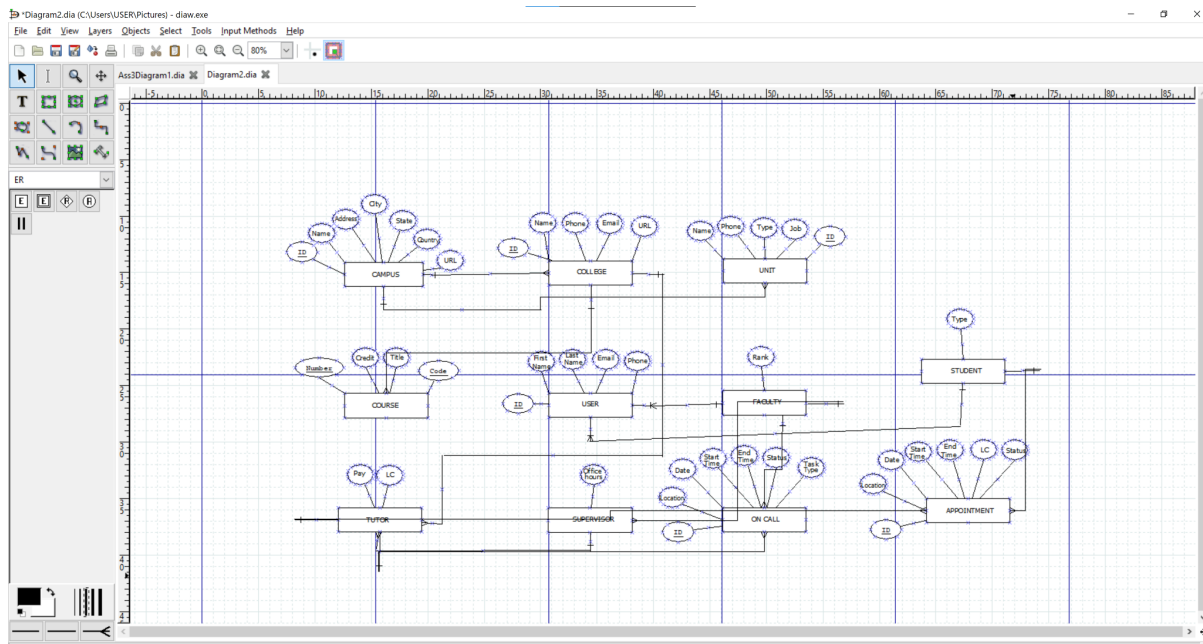# DB Assignment

Task#1:

<u>Sol:</u>

In task#1 we have to make an ER Diagram, all the requirements and specifications were given. Here is the picture of diagram:

For **DIA** file:

https://drive.google.com/drive/folders/1ooSmScA4VgdezZyQqUwIMZwnr-4LiwL-?usp=sharing

Strong entities are entities that have their own unique and independent existence within the database.

Weak Entities:

None of the entities in the provided model are weak entities. Weak entities are entities that do not have a primary key attribute of their own and rely on a related strong entity for identification.
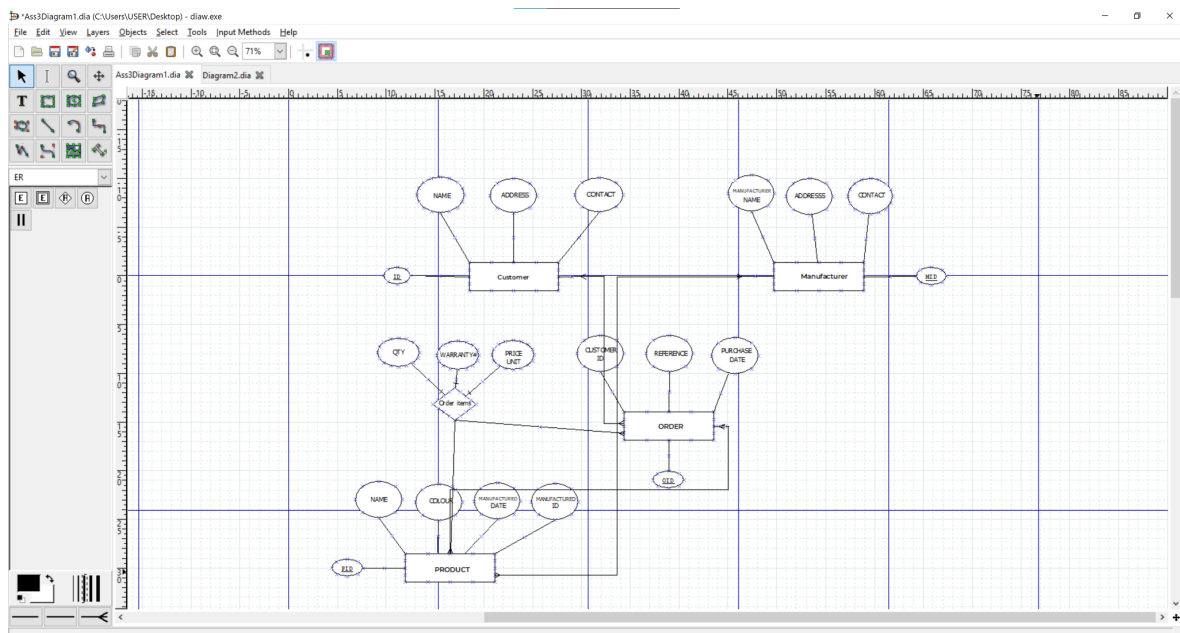
Assumptions:

- The relationship between "Faculty" and "Student" is represented as separate entities, assuming that a user can be either a faculty member, a student, or both.
- The relationships between "On-Call" and "Faculty" and between "On-Call" and "Tutor" indicate that faculty members can initiate on-calls for tutors.

- The relationships between "Student" and "Appointment" and between "Tutor" and "Appointment" represent appointments scheduled between students and tutors.

Task#2
<u>Sol:</u>

In task#2 we, were provided with the schema, and we have to make an ER diagram based on that schema.
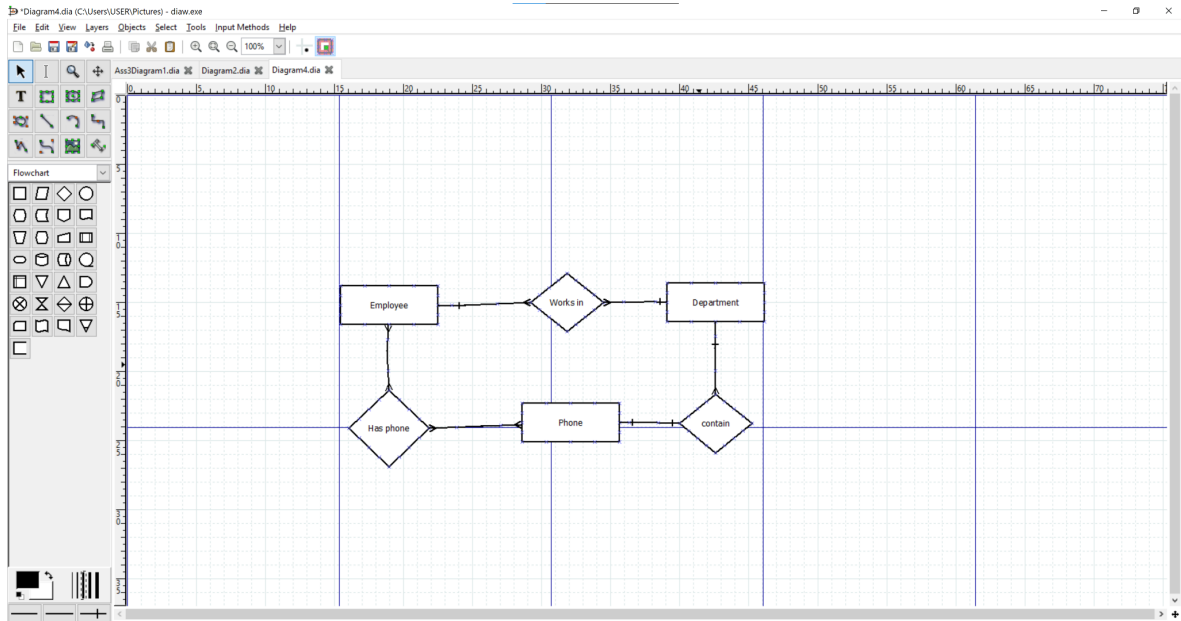Here is the picture:

For **DIA** diagram, link:
https://drive.google.com/drive/folders/1ooSmScA4VgdezZyQqUwIMZwnr-4LiwL-?usp=sharing

Task#3:
<u>Sol:</u>
In this task, we were provided with the ER diagram, the question requirement was to add the min, max in diagram and write the conditions in which HAS PHONE would be redundant.
Here is the picture:

Conditions:

- The relationship between Employee and Phone is redundant because it's not necessary to establish a separate relationship between employees and phones.
- The relationship between Phone and Department (HAS PHONE) is also redundant if we consider that each phone is used by one department (1,1) and each department can have up to three phones (1,3). This relationship is already defined within the Department entity's attributes.

For **DIA** Diagram link:

https://drive.google.com/drive/folders/1ooSmScA4VgdezZyQqUwIMZwnr-4LiwL-?usp=sharing