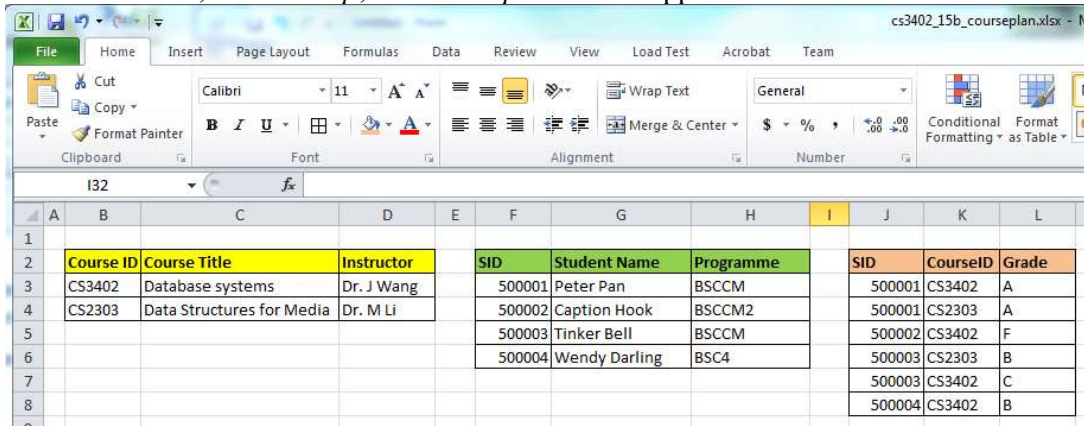


CS3402 Practice 1 (Introduction and ER Model):

- Below are some sample data stored in an Excel file. Identify *entity*, *entity set*, *attribute*, *relationship*, *relationship set* in this application.



The screenshot shows an Excel spreadsheet with the following data:

Course ID	Course Title	Instructor	SID	Student Name	Programme	SID	CourseID	Grade
CS3402	Database systems	Dr. J Wang	500001	Peter Pan	BSCCM	500001	CS3402	A
CS2303	Data Structures for Media	Dr. M Li	500002	Caption Hook	BSCCM2	500001	CS2303	A
			500003	Tinker Bell	BSCCM	500002	CS3402	F
			500004	Wendy Darling	BSC4	500003	CS2303	B
						500003	CS3402	C
						500004	CS3402	B

- Construct an ER diagram for a car insurance company with a set of customers, each of whom owns a number of cars. Each car has a number of recorded accidents associated with it.
- Construct an ER diagram for a hospital with a set of patients and a set of medical doctors. A log of the various conducted tests and results is associated with each patient.

Note the questions (2 & 3) do not contain sufficient information for building the two E/R diagrams. So you can have your own assumptions when drawing your ER diagrams.

CS3402 Practice 1:

1. Answer:

Entity: every single course, each individual student, each instructor

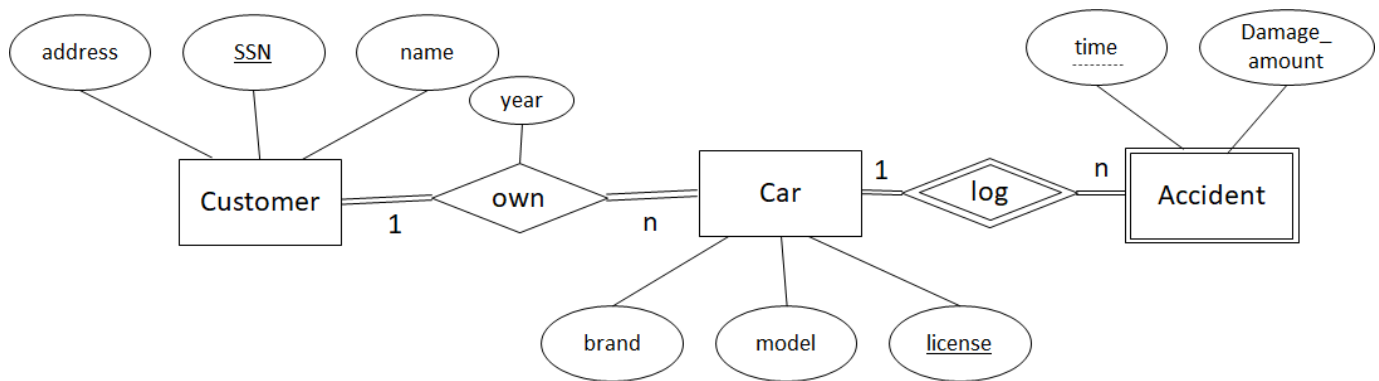
Entity set: the set of students, the set of courses, and the set of instructors

Attributes: CourseID, Course Title, Student ID, Student Name, Student Programme, Instructor Name, Grade (an attribute of a relationship).

Relationship: Dr. J Wang teaching CS3402, Dr. M Li teaching CS2303, student Peter Pan taking course CS2303, student Caption Hook taking course CS3402 ...

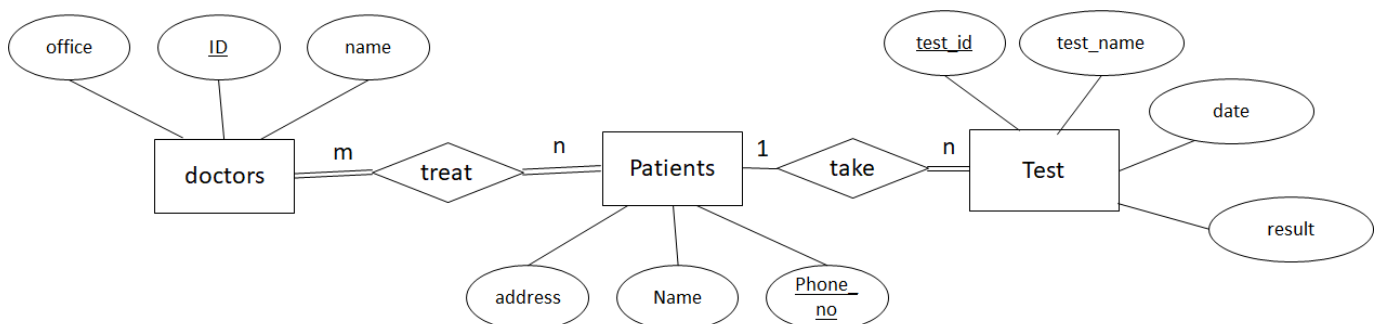
Relationship set: the set of relationships of which students taking which courses, the set of relationships of which teacher teaching which course

2. Answer:



It is assumed that one car is owned by only one customer. Each recorded accident is associated with one car.

3. Answer:



It is assumed that a doctor treats many patients and a patients may be treated by one or more doctors. One medical test only involves one patient and a patient may take no or many tests. Each test has a unique test ID.