2 – ER SOLUTIONS

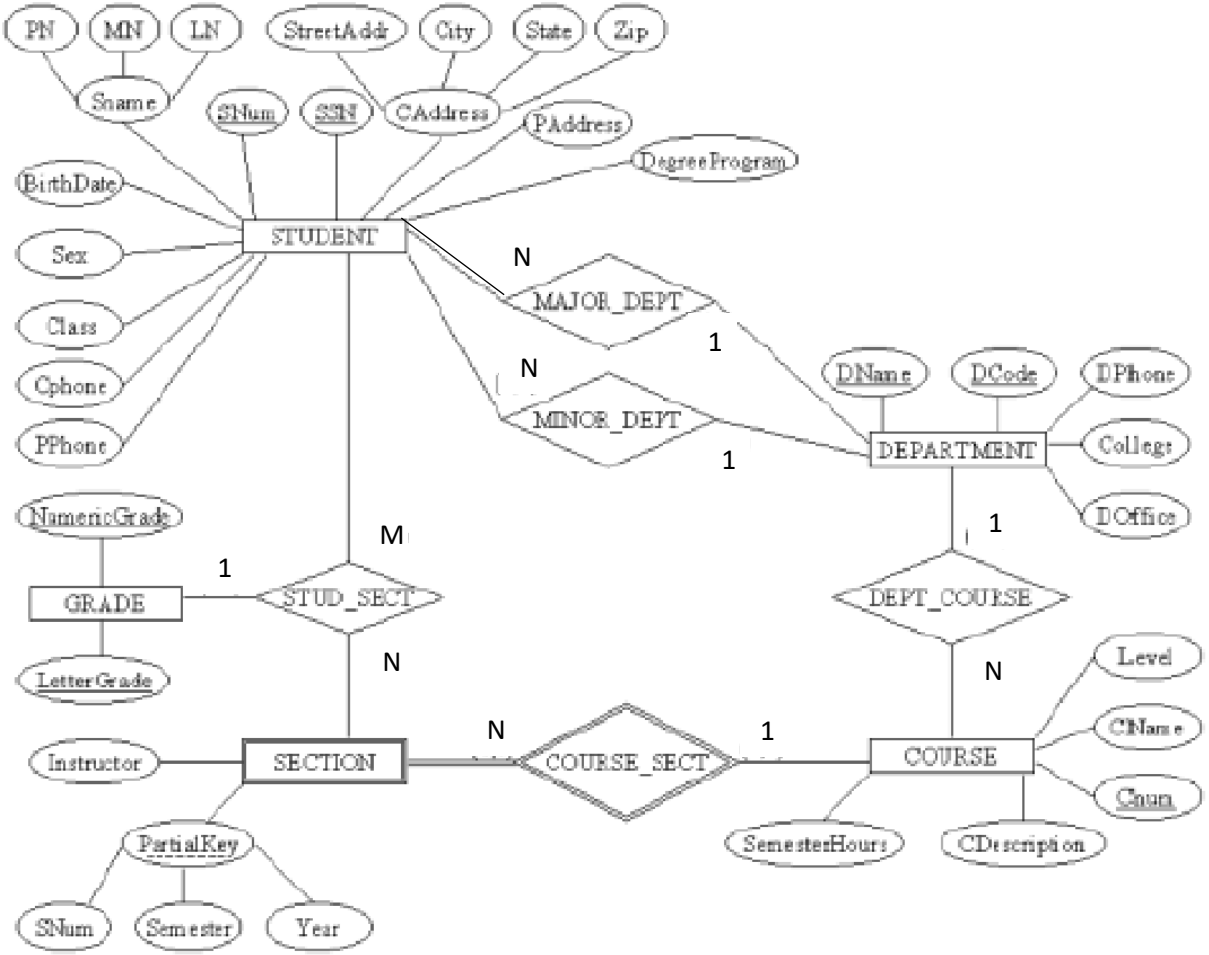
Solution 2.1 - Using the above ER schema diagram for the COMPANY database, provide one example for each of the following:

Component	Example
Strong entity	EMPLOYEE, DEPARTMENT, PROJECT
Weak entity	DEPENDENT
Primary Key	EMPLOYEE.Ssn, (DEPARTMENT.Name, DEPARTMENT.Number), (PROJECT.Name, PROJECT.Number), (DEPENDENT.Ssn, DEPENDENT.Name)
Partial Key	DEPENDENT.Name
Composite attribute	(EMPLOYEE.FName, EMPLOYEE.MInit, EMPLOYEE.LName)
Derived attribute	DEPARTMENT.Number_of_employees
Multivalued attribute	DEPARTMENT.Locations
1-1 relationship	MANAGES
1-N relationship	CONTROLS, WORKS_FOR, SUPERVISION
M-N relationship	WORKS_ON

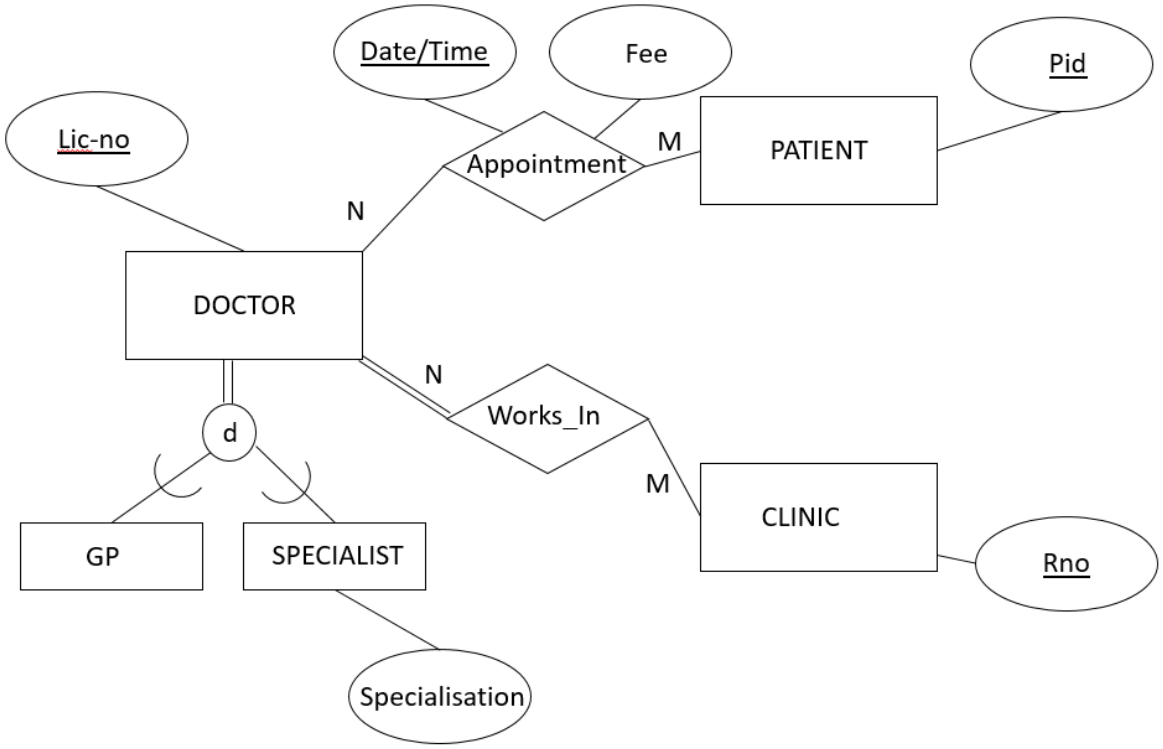
Solution 2.2 - Underline or circle the (strong) entities which will be created if an ER diagram was to be made based on the UoD below:

The entities which will be created are: BANK, ACCOUNT, LOAN, CUSTOMERS. It is important to note that BANK-BRANCH will be created as a weak-entity not a strong entity, as it is dependent on BANK, i.e. unable to uniquely identify itself without BANK

Solution 2.3 - Draw an ER diagram for the following application. Specify key attributes of each entity type and structural constraints on each relationship type. Note any unspecified requirements and make appropriate assumptions to make the specification complete.



Solution 2.4 - Draw an ER diagram for the following application. Specify key attributes of each entity type and structural constraints on each relationship type. Note any unspecified requirements and make appropriate assumptions to make the specification complete.



Solution 2.5 - Draw an ER diagram for the following application. Specify key attributes of each entity type and structural constraints on each relationship type. Note any unspecified requirements and make appropriate assumptions to make the specification complete.