# Assignment – 1

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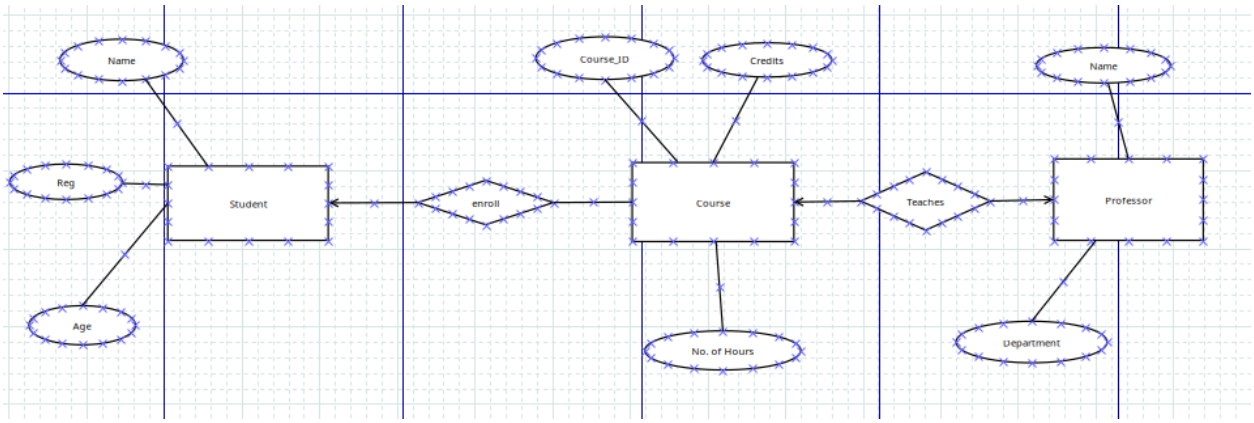
Section – C

Q1 - Consider the following scenario of a university: In a university, a Student enrolls in Courses. A student must be assigned to at least one or more Courses. Each course is taught by a single Professor. To maintain instruction quality, a Professor can deliver only one course. For the above scenario, identify proper entities, attributes, relationships and cardinalities to draw a suitable ER-diagram.



Q2 - Consider the following scenario: An institute has recently setup a state-of-the-art research facility in the field of Engineering. Apart from research scholars (students) and professors, it also includes employees who work on different projects undertaken by the institution. The institute has proposed to develop a Library Information System (LIS) for the benefit of students and employees of the institute. LIS will enable the members to borrow a book (or return it) with ease while sitting at his desk/chamber. The system also enables a member to extend the date of his borrowing if no other booking for that particular book has been made. For the library staff, this system aids them to easily handle day-to-day book transactions. The librarian, who has administrative privileges and complete control over the system, can enter a new record into the system when a new book has been purchased, or remove a record in case any book is taken off the shelf. Any non-member is free to use this system to browse/search books online. However, issuing or returning books is restricted to valid users (members) of LIS only. For the above scenario, identify proper entities, attributes, relationships and cardinalities to draw a suitable ER-diagram.