

Name: \_\_\_\_\_ Roll Number: \_\_\_\_\_

**Draw ERD with entities, attributes, relationships including cardinality & participation.**

**Case 1:**

A University has many departments

Each Department has multiple instructors.

One of the Instructors is the head of the department.

One Instructor belongs to only one department

Each department offers multiple courses.

Each course is taught by a single instructor.

An instructor may teach more than one course.

A Student may enroll in many courses offered by different departments.

**Case 2:**

In a particular city

There are multiple banks and each bank has multiple branches.

Each branch has multiple customers.

Customers can have different types of accounts

Customers can take different types of loans from the bank branch

One customer can have more than 1 accounts and loans

**Case 3:**

A store wants to keep track of all its musical albums.

Musical albums have a title, price, a unique identifier as albumid.

There are artists who create albums. We save artist's name and cnic for our records.

One artist can create multiple albums. But one album can only belong to a single artist.

One album can be of a specific genre.

Genre has genreid, name and description.

A single Genre can be of multiple albums.

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**Reduce the following ERD to Relational Schema**