Thapar institute of engineering and technology

(Deemed to be University)

Patiala, Punjab



**A Mini Project On**

**“University Management System”**

**For the partial complement of Database Management System 2025**

**Under the supervision of**

**Department of Computer Science and Engineering**

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**Submitted To:**

THAPAR Institute OF ENGINEERING AND TECHNOLOGY

**Department of Computer Science and Engineering**

**Patiala, Punjab, India**

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# University Management System

## Entity Set

1. Students

* Student ID (Primary key)
* Name (Composite attribute)
  + First Name
  + Middle Name
  + Last Name
* Address (Composite Key)
  + Street
  + District
  + State
  + Country
* Gender
* Date of Birth
* Age
* Phone (Multivalued attributes)
* College Mail
* Enrollment Year
* Graduation Year
* Status

1. Faculty

* Faculty ID (primary key)
  + Name (composite attribute)
    - First name
    - Middle name
    - Last name
* Phone (multivalued attributes)
* Date of joining
* Status
* Designation

1. Department
   * Department ID (Primary Key)
   * Department name
   * Department abbreviation
   * Head of department
2. Courses
   * Course ID (primary key)
   * Course name
   * Course code
   * Credits
   * Semester
3. Enrollment
   * Enrollment ID (primary key)
   * Semester
   * Grade
   * Enrollment date
4. Exams
   * Exam ID (primary key)
   * Exam date
   * Exam duration
   * Exam type
   * Venue
5. Results
   * Result ID (primary key)
   * Marks obtained
   * Grade
6. Fees
   * Fee ID (primary key)
   * Amount
   * Payment date
   * Status
7. Admin
   * Admin ID (primary key)
   * Username
   * Password
   * Type

## Relationships

* Students → Enrolled in → Courses
* Students → Pays → Fees
* Students → Takes → Exams
* Students → Receives → Results
* Students → Allocated to → Hostel
* Faculty → Teaches → Courses
* Faculty → Belongs to → Department
* Courses → Conducts → Exams
* Courses → Belong to → Department
* Admin Users → Manages → Students, Faculty, Courses, Fees etc.