|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| StudentID | StudentName | CourseID | CourseName | InstructorID | InstructorName | InstructorPhone | Grade |
| 101 | John Doe | CSE101 | Data Structures | I01 | Dr. Smith | 555-1234 | A |
| 101 | John Doe | CSE102 | Databases | I02 | Dr. Allen | 555-5678 | B+ |
| 102 | Jane Roe | CSE101 | Data Structures | I01 | Dr. Smith | 555-1234 | B |
| 103 | Mark Smith | CSE103 | Networking | I03 | Dr. White | 555-4321 | A- |
| 103 | Mark Smith | CSE101 | Data Structures | I01 | Dr. Smith | 555-1234 | B |

**Kashaf Armaghan Chaudhary**

**Lab 10**

**49972**

**1NF:**

**2NF:**

1. **Student Table (information only dependent on StudentID):**

|  |  |
| --- | --- |
| StudentID | StudentName |
| 101 | John Doe |
| 102 | Jane Roe |
| 103 | Mark Smith |

1. **Course Table** **(information only dependent on CourseID):**

|  |  |  |
| --- | --- | --- |
| CourseID | CourseName | InstructorID |
| CSE101 | Data Structures | Io1 |
| CSE102 | Databases | I02 |
| CSE103 | Networking | I03 |

1. **Instructor Table** **(information only dependent on InstructorID):**

|  |  |  |
| --- | --- | --- |
| InstuctorID | InstructorName | InstructorPhone |
| I01 | Dr. Smith | 555-1234 |
| I02 | Dr. Allen | 555-5678 |
| I03 | Dr. White | 555-4321 |

1. **Enrollment Table** **(mapping students to courses and grades):**

|  |  |  |
| --- | --- | --- |
| StudentID | CourseID | Grade |
| 101 | CSE101 | A |
| 101 | CSE102 | B+ |
| 102 | CSE101 | B |
| 103 | CSE103 | A- |
| 103 | CSE101 | B |

**3NF Tables:**

1. **Student Table**:

|  |  |
| --- | --- |
| StudentID | StudentName |
| 101 | John Doe |
| 102 | Jane Roe |
| 103 | Mark Smith |

1. **Course Table**:

|  |  |  |
| --- | --- | --- |
| CourseID | CourseName | InstructorID |
| CSE101 | Data Structures | Io1 |
| CSE102 | Databases | I02 |
| CSE103 | Networking | I03 |

1. **Instructor Table**:

|  |  |  |
| --- | --- | --- |
| InstuctorID | InstructorName | InstructorPhone |
| I01 | Dr. Smith | 555-1234 |
| I02 | Dr. Allen | 555-5678 |
| I03 | Dr. White | 555-4321 |

1. **Enrollment Table**:

|  |  |  |
| --- | --- | --- |
| StudentID | CourseID | Grade |
| 101 | CSE101 | A |
| 101 | CSE102 | B+ |
| 102 | CSE101 | B |
| 103 | CSE103 | A- |
| 103 | CSE101 | B |