**Database Design & SQL -2023S   
Student ID:** 901142 **Student Name:** Roshan Shrestha  
**Practical Exercise 5\_6\_7\_8**

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**Activity #1**

**List of entities:**

* **SECTION\_142**
* **STAFF\_142**
* **STAFF\_DETAIL\_142**
* **PERIOD\_142**
* **PERIOD\_DETAIL\_142**
* **UNIT\_142**
* **UNIT\_DETAIL\_142**
* **PERSONAL\_DETAIL\_142**
* **STUDENT\_142**
* **ENROLLED\_COURSE\_142**

**Activity #2**

**Optional and mandatory attributes:**

1. **SECTION\_142**

* Section id (Mandatory)
* Name (Mandatory)
* Long name (Mandatory)

1. **STAFF\_142**

* Staff id (Mandatory)
* Section id (Mandatory)

1. **STAFF\_DETAIL\_142**

* Staff id (Mandatory)
* Department (Mandatory)
* Contact (Mandatory)
* Join date (Mandatory)
* Personal detail id (Mandatory)

1. **PERIOD\_142**

* Period id (Mandatory)
* Unit id (Mandatory)

1. **PERIOD\_DETAIL\_142**

* Period id (Mandatory)
* Year (Mandatory)
* Teaching duration (Mandatory)
* Start date (Mandatory)
* End date (Mandatory)
* Break start date (Mandatory)
* Break end date (Mandatory)

1. **UNIT\_142**

* Unit id (Mandatory)
* Section id (Mandatory)

1. **UNIT\_DETAIL\_142**

* Unit id (Mandatory)
* Code (Mandatory)
* Name (Mandatory)
* Credit score (Mandatory)
* Staff id (Mandatory)

1. **PERSONAL\_DETAIL\_142**

* Personal detail id (Mandatory)
* Full name (Mandatory)
* Email (Mandatory)
* Role (Mandatory)
* Dob (Mandatory)
* Address (Mandatory)

1. **STUDENT\_142**

* Study type (Mandatory)
* Nationality (Mandatory)
* Admission date (Mandatory)
* Personal detail id (Mandatory)

1. **ENROLLED\_COURSE\_142**

* Enrolled course id (Mandatory)
* Obtained score (Mandatory)
* Completion date (Mandatory)
* Student id (Mandatory)
* Unit id (Mandatory)
* Period id (Mandatory)

**Activity #3**

**Relationship matrix table:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **ENROLLED\_COURSE\_142** | **PERIOD\_142** | **PERIOD\_DETAIL\_142** | **PERSONAL\_DETAIL\_142** | **SECTION\_142** | **STAFF\_142** | **STAFF\_DETAIL\_142** | **STUDENT\_142** | **UNIT\_142** | **UNIT\_DETAIL\_142** |
| **ENROLLED\_COURSE\_142** |  |  | N : 1 |  |  |  |  | N : 1 |  | N : 1 |
| **PERIOD\_142** |  |  | N : 1 |  |  |  |  |  | 1 : N |  |
| **PERIOD\_DETAIL\_142** | 1 : N | 1 : N |  |  |  |  |  |  |  |  |
| **PERSONAL\_DETAIL\_142** |  |  |  |  |  |  | 1 : 1 | 1 : 1 |  |  |
| **SECTION\_142** |  |  |  |  |  | 1 : N |  |  | 1 : N |  |
| **STAFF\_142** |  |  |  |  | N : 1 |  | N : 1 |  |  |  |
| **STAFF\_DETAIL\_142** |  |  |  | 1 : 1 |  | 1 : N |  |  |  |  |
| **STUDENT\_142** | 1 : N |  |  | 1 : 1 |  |  |  |  |  |  |
| **UNIT\_142** |  | N : 1 |  |  | N : 1 |  |  |  |  | N : 1 |
| **UNIT\_DETAIL\_142** | 1 : N |  |  |  |  |  |  |  | 1 : N |  |

**Activity #4**

**A picture containing text, screenshot, diagram, parallel

Description automatically generatedEntity Relationship Diagram:**

Figure : ER diagram