[**INFT 1111 – Database Course**](https://durhamcollege.desire2learn.com/d2l/le/news/621846/1133569/view)

**Lab - 3**

**Database Design Lab: Logical and Physical Design**

**Submitted by: Jaskirat Athwal**

**INDEX**

**Identify entities and attributes ------------------------ 2 , 3**

**Data normalization ------------------------ 3**

**Entity-Relationship Diagrams (ERD) ------------------------ 4**

**Task1**

**Identify entities and attributes**

1. **Customers**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Description** |
| Customer ID | INT | Unique customer ID |
| First name | VARCHAR | First name of the customer |
| Last name | VARCHAR | Last name of the customer |
| Email | VARCHAR (UNIQUE) | Email address |
| Phone number | VARCHAR (UNIQUE) | Phone number |
| Address | Text | Shipping address |

1. **Products**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Description** |
| Product ID | INT | Unique product ID |
| Product name | VARCHAR | Product name |
| Category | VARCHAR | Type of item like electronics, hardware etc. |
| Price | DECIMAL | Price of the product |
| Manufacturer | TEXT | Manufacturer of the product |

1. **Orders**

|  |  |  |
| --- | --- | --- |
| **Attributes** | **Data type** | **Description** |
| Order ID | INT | Unique ID of the order placed |
| Customer ID | INT | Unique ID of the customer |
| Product ID | INT | ID of product purchased |
| Quantity | INT | Number of items |
| Order date | DATE | Date on which order was placed |
| Unit price | DECIMAL | Items price/unit |
| Total price | DECIMAL | Total amount of the order |

1. **Inventory**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Description** |
| Product ID | INT | Unique product ID links to product |
| Inventory | INT | Number of items in stock |
| Location | VARCHAR | Location of item in storage |

1. **Reviews**

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Data type** | **Description** |
| Review ID | INT | Unique review ID |
| Customer ID | INT | ID of the customer/ Reviewer |
| Product ID | INT | Product being reviewed |
| Rating | INT | Rating Out of 5 |
| Comment | TEXT | Written review |

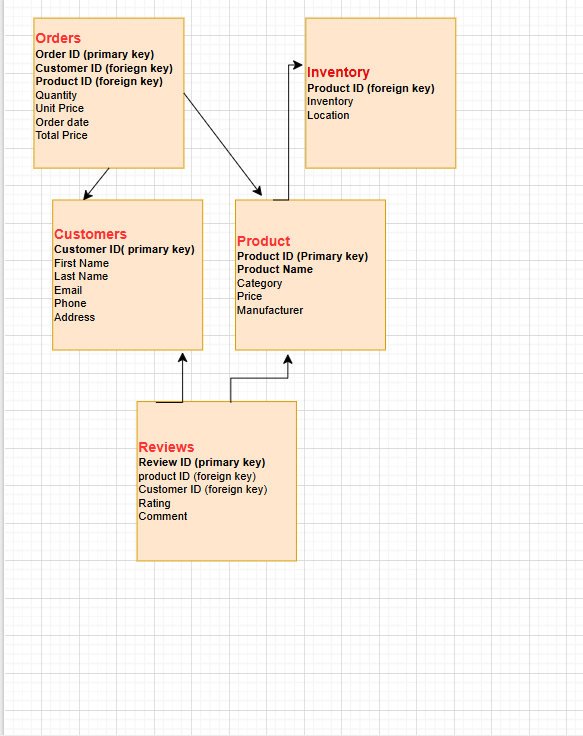
**Task 2**

**Data normalization**

|  |  |  |
| --- | --- | --- |
| **Table** | **Primary key** | **Foreign key** |
| **Customers** | Customer ID | - |
| **Products** | Product ID | - |
| **Orders** | Order ID | Customer ID, product ID |
| **Inventory** | Product ID | Product ID |
| **Reviews** | Review ID | Customer ID, product ID |

**Task 3**

**Entity-Relationship Diagrams (ERD)**

****