**Database Management System**

**Mid Term**



**Spring 2021**

**CSE403 DBMS**

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Class Section: **B**

“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Submitted to:

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**Entity Description Table:**

|  |  |
| --- | --- |
|  |  |
| Customer | Anyone who orders something from Dunsho. Example: Shah Raza |
| Product | The items that are available at Dunsho. Example: Medicines, Food, Gifts etc. |
| Order | The transaction associated with the sale of one or more products to a customer. Example: Shah Raza bought a Pizza on May 26, 2021 |
| supplier | An associate that provides products to Dunsho. Example: PizzaHut, Stanley ect. |
| Item | A sub component of a Product. Example: Pizza(Product) may contain Onion(item) |
| Shipment | The transaction associated with all the items received in the same package by Dunsho. Example: The receipt of a Laptop ordered by Shah Raza. |
| Employee | A worker that works at Dunsho. Example: Receptionist etc. |
| Supervisor | A worker that supervises other employees. Example: Ali(Supervisor) supervises Zulkifal and Hamza(Employees). |
| order line | The quantity of products ordered. Example: Shah Raza ordered 4 pizzas. |
| Sales Territory | A region of service. Example: Hayatabad. |
| Sales Person | A worker that sells products by promoting it. |

**Business Rules:**

1. A customer may submit any number of orders but need not to submit any. Each order is submitted by exactly one customer.
2. A given customer order must request at least one product and only one product per order line item. Any product sold by Dunsho may not appear on any order line item, or may appear on one or more order line items.
3. A Customer may order from any of the sales territory but need not to order from any. A territory has many Customers.
4. A salesperson serves exactly one sales territory. Each sales territory is served by one or more salespersons.
5. Each product is assembled from a specified quantity of one or more items. Each item is assembled into one or more products, using a specified quantity of the item for each product.
6. Each employee has exactly one supervisor. An employee who is a supervisor may supervise any number of employees, but not all employees are supervisors.
7. A Supplier may supply any number of items. Each item is supplied by any number of suppliers (at least one).
8. A shipment must include one or more items. An item may be included in several shipments.
9. A Supplier may send many shipments.
10. Each Shipment must be sent by one supplier.

**ER Diagram:**

