**Inventory Management – Case study**

**Team C – Classes Document**

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**Class 1: Supplier**

**Fields:**

|  |  |  |
| --- | --- | --- |
| **#** | **Field** | **Description** |
| 1 | private int \_supplierID | Primary key (unique) ID of supplier. |
| 2 | private string \_supplierName | Name of the supplier |
| 3 | private string \_supplierAddress | Address of the supplier |
| 4 | Private string \_supplieremailID | Email of the Supplier |
| 5 | Private string \_supplierPhone | Phone of the Supplier |
| 6 | Private int \_rawQuantity | Quantity of requested raw materials |
| 7 | Private int \_rawPrice | Price per unit of the raw material |
| 8 | Private double Payments | Payment Received by Supplier |

**Properties:**

|  |  |  |
| --- | --- | --- |
| **#** | **Property** | **Validations** |
| 1 | public int SupplierID | Unique; not null; System-generated (starts with 1, increment by 1) |
| 2 | public string SupplierName | Name of the employee.  Alpha-numeric; not null.  Should be less than 40 characters. |
| 3 | public string SupplierAddress | Unique; Not null.  Should between 4 to 10 characters.  Alpha-numeric. |
| 4 | Public string SupplierEmailID | Unique; Not null.  Should Be a valid email ID  Alpha Numeric |
| 5 | Public string SupplierPhone | Unique; Not null.  Should be 10 Characters  Numeric |
| 6 | Public int RawQuantity | Not Null  Numeric |
| 7 | Public int RawPrice | Not Null  Numeric |
| 8 | Private double Payments | Numeric |

**Methods:**

|  |  |  |
| --- | --- | --- |
| **#** | **Method** | **Description** |
| 1 | Public void TrackingDetails(int OrderID, DateTime DoOrder, DateTime DoDispatch, DateTime DoArrival ) | Use for tracking of raw material consignment |
| 2 | public bool PaymentUpdate(double amount) | Update Supplier payments with amount received |
| 3 | Public RecordConsDetails(string consID, int RawQuantity, int RawPrice ) | Record the Details of the Consignment |

**Class 2: Distributor**

**Fields:**

|  |  |  |
| --- | --- | --- |
| **#** | **Field** | **Description** |
| 1 | private string \_distributorID | Primary key (unique) value of distributor. |
| 2 | private string \_distributorName | Name of the distributor |
| 3 | private string \_distributorAddress | Address of the distributor |
| 4 | Private string \_distributorEmailID | Email of the distributor |
| 5 | Private string \_distributorPhone | Phone Number of the distributor |
| 6 | Private int \_productQuantity | Total Quantity |
| 7 | Private double \_productPrice | Price of each quantity |
| 8 | Private string \_productID | Unique ID of the 5 products |

**Properties:**

|  |  |  |
| --- | --- | --- |
| **#** | **Property** | **Validations** |
| 1 | public string DistributorID |  |
| 2 | public string DistributorName | Length 5-30 Characters |
| 3 | public string DistributorAddress | Length 20-50 characters |
| 4 | Public string DistributorEmailID | Length 15-30 characters, contains {.,@,com} |
| 5 | Public string DistributorPhone | Length 10 characters |
| 6 | Public int ProductQuantity |  |
| 7 | Public double ProductPrice |  |
| 8 | Public string ProductID |  |

**Methods:**

|  |  |  |
| --- | --- | --- |
| **#** | **Method** | **Description** |
| 1 | Public void DistributorTrackingDetails(string DistributorID, DateTime DoOrder, DateTime DoDispatch, DateTime DoArrival ) | Use for tracking purpose of distributor |
| 2 | public double TotalPrice(int ProductQuantity, ProductPrice) | Returns total price of shipment |
| 3 | public void CancelOrder()=>bool | If true DistributorRefund(), Inventory Management, else continue |
| 4 | Public void DistributorBill() | TotalPrice, tax, Billing details |
| 5 | Public void DistributorPayment() | Will call tracking Details, Billing Details, inventory Management |
| 6 | Public void DistributorRefund() | Update payment/finance |

**Class 3: Admin**

**Methods:**

|  |  |  |
| --- | --- | --- |
| **#** | **Method** | **Description** |
| 1 | Private void AddSystemUser() | Add System User |

**Class 4: System User**

**Fields:**

|  |  |  |
| --- | --- | --- |
| **#** | **Field** | **Description** |
| 1 |  |  |

**Properties:**

|  |  |  |
| --- | --- | --- |
| **#** | **Property** | **Validations** |
| 1 | public string DistributorID |  |
| 2 | public string DistributorName | Length 5-30 Characters |
| 3 | public string DistributorAddress | Length 20-50 characters |
| 4 | Public string DistributorEmailID | Length 15-30 characters, contains {.,@,com} |
| 5 | Public string DistributorPhone | Length 10 characters |
| 6 | Public int ProductQuantity |  |
| 7 | Public double ProductPrice |  |
| 8 | Public string ProductID |  |

**Methods:**

|  |  |  |
| --- | --- | --- |
| **#** | **Method** | **Description** |
| **I** | **Raw Material Management** | |
|  |  |  |
|  |  |  |
|  |  |  |
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