Tyler Moon  
Destiny Bazaan  
Cassainy Noel

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Assignment 9.1

Business Rules and Assumptions:

Winery Operations & Products:

### Bacchus Winery produces four types of wine:

* + Merlot
  + Cabernet
  + Chablis
  + Chardonnay
* The winery grows its own grapes, and Henry Doyle (Production Manager) is responsible for tracking grape harvesting and quality control.
* The winery maintains an inventory of harvested grapes, processed wine, and necessary supplies.

### Employees & Departments:

* + **Finance**: Janet Collins (Payroll & financial oversight)
  + **Marketing**: Roz Murphy (Head), Bob Ulrich (Assistant)
  + **Production**: Henry Doyle (Manages 20 production employees)
  + **Distribution**: Maria Costanza (Manages shipments & logistics)
* Each employee belongs to one department only.
* Work hours are tracked for payroll and reporting.

### Suppliers & Inventory:

* Three suppliers deliver monthly:
  + **Supplier A**: Bottles and corks
  + **Supplier B**: Labels and boxes
  + **Supplier C**: Vats and tubing
* Inventory must be tracked to ensure sufficient supplies for production.
* Suppliers deliver monthly and are tracked for on-time delivery.
* Supplier performance is monitored, with reports tracking expected vs. actual delivery dates.
* Inventory records store information about available wine and quality.
* Inventory tracks each wine type.
* The inventory is updated based on wine sales and supplier deliveries.

### Wine Sales & Distribution:

* Distributors order wine online and track shipments.
* Wine sales are tracked by distributor and type, analyzing:
  + Best-selling wines
  + Top distributors
  + Underperforming wines
* A Wine Sales Report is generated to compare sales trends and improve distributor targeting.

### Market Research & Pricing Adjustments:

* Marketing gathers feedback from distributors to track customer preferences.
* Finance (Janet) works with Marketing to adjust pricing strategies based on demand and distributor trends.

### Inventory Management

* Inventory records store information about available wine and quality.
* Inventory tracks QualityInStock for each wine type.
* The inventory is updated based on wine sales and supplier deliveries.

# Initial ERD Components:

## Entities:

* Employee
* Department
* Wine
* Supplier
* Distributor
* Order
* Delivery
* Inventory

# Attributes:

## Employee:

* EmployeeID
* Name
* DepartmentID
* HoursWorked
* Position

## Department:

* DepartmentID
* Name

## Wine:

* WineID
* WineType
* SalesVolume
* InventoryQuantity

## Supplier:

* SupplierID
* Name
* ComponentType
* ContactInfo

## Distributor:

* DistributorID
* Name
* ContactInfo
* Region

## Order:

* OrderID
* DistributorID
* OrderDate
* ShipDate
* Status

## Delivery:

* DeliveryID
* OrderID
* ExpectedDate
* ActualDate
* Status

## Inventory:

* InventoryID
* WineID
* QualityInStock

# Initial ERD:

