VINEYARD

1. A description of the conceptual design (a general restatement of the problem domain).

The conceptual design for the Grand Vineyard Trading Company (GVTC) database includes a detailed representation of the company's operations and interactions within its area. Entities at its heart include employees, vineyards, grape varieties, wines, products, customers, and marketing campaigns. Employees, including interns, can have a variety of responsibilities and supervise others while overseeing vineyard operations and wine production. Vineyards are allotted for specific grape kinds, and each harvest is tracked with grape ripeness measurements. Wines are precisely prepared, frequently containing combinations of different grape kinds. Wine-derived products, ranging from individual bottles to cases, are related with vendors and purchase orders. Customers, whether individuals or businesses, conduct a variety of transactions, including placing orders and making bookings for events or accommodations.

2. List any assumptions you made about conceptual design.

Assumptions:

- Each employee is assigned a unique EmployeeID.

- Each supervisor is an employee with a unique SupervisorID.

- Each qualification, driver certification, and internship record is associated with an individual employee.

- Every vineyard has a unique VineyardID.

- Every grape variety has an own GrapeVarietyID.

- Each grape harvest record is tied with a specific vineyard and grape type for the current vintage year.

- Every wine has a unique WineID.

- Each wine composition record corresponds to a specific wine and grape variety.

- Every product has a unique ProductID.

- Each bottle type is assigned a unique BottleTypeID.

- Each vendor is assigned a unique VendorID.

- Each purchase order is associated with a certain vendor.

- Each customer is assigned a unique CustomerID.

- Each order is associated with a certain consumer.

- Each payment is associated with a certain order.

- Each marketing campaign is assigned a unique CampaignID.

- Each consumer marketing activity record corresponds to a single customer and campaign.

- Every wine club has a unique ClubID.

- Each club-provided wine record is tied with a certain wine club and wine.

- Each reservation is associated with a certain consumer.

Entities and Attributes:

1. **Employee**:

   - Attributes: EmployeeID (PK), Name, Position, SSN, StartDate, JobTitle, InitialPayRate, CurrentPayRate, Address, Phone, Email, EmergencyContact.

2. **Supervisor**:

   - Attributes: SupervisorID (PK), EmployeeID (FK referencing Employee), SupervisorName.

3. **Certification**:   - Attributes: CertificationID (PK), EmployeeID (FK referencing Employee), CertificationLevel, CertificationDate, ReCertificationOutcomes.

4. **DriverCertification**:

   - Attributes: DriverCertificationID (PK), EmployeeID (FK referencing Employee), CDL, CDLExpirationDate.

5. **Intern**:

   - Attributes: InternID (PK), EmployeeID (FK referencing Employee), InternshipRequirement, GraduationDate.

6. **Vineyard**:

   - Attributes: VineyardID (PK), VineyardName, Location, SizeInAcres.

7. **GrapeVariety**:

   - Attributes: GrapeVarietyID (PK), VarietyName, JuiceConversionRatio, WineStorageRequirement, WineAgingRequirement.

8. **GrapeHarvest**:

   - Attributes: HarvestID (PK), VineyardID (FK referencing Vineyard), GrapeVarietyID (FK referencing GrapeVariety), VintageYear, TotalWeight, RipenessPercentage.

9. **Wine**:

   - Attributes: WineID (PK), WineName, VintageYear, Category, AlcoholPercentage, EmployeeInCharge (FK referencing Employee), HarvestID (FK referencing GrapeHarvest).

10. **WineComposition**:

   - Attributes: CompositionID (PK), WineID (FK referencing Wine), GrapeVarietyID (FK referencing GrapeVariety), JuiceProportion.

11. **Product**:

   - Attributes: ProductID (PK), WineID (FK referencing Wine), BottleTypeID (FK referencing BottleType), CaseQuantity, Price.

12. **BottleType**:

   - Attributes: BottleTypeID (PK), Capacity, Shape, GlassColor, UnitCost.

13. **Vendor**:

   - Attributes: VendorID (PK), VendorName, Address, Phone, ContactName.

14. **PurchaseOrder**:

   - Attributes: OrderID (PK), VendorID (FK referencing Vendor), OrderDate, ShipDate, ActualPrice.

15. **Customer**:

   - Attributes: CustomerID (PK), CustomerType, FirstName, LastName, Address, ShippingAddress, DateOfBirth, Email, Phone.

16. **RestaurantWineShop**:

   - Attributes: CustomerID (PK, FK referencing Customer), CompanyName, TaxID, ResaleLicense, Discount.

17. **Order**:

   - Attributes: OrderID (PK), CustomerID (FK referencing Customer), OrderDate, ShipmentStatus.

18. **Payment**:

   - Attributes: PaymentID (PK), OrderID (FK referencing Order), PaymentType, PaymentDate, Amount.

19. **MarketingCampaign**:

   - Attributes: CampaignID (PK), CampaignName.

20. **CustomerMarketingActivity:**

   - Attributes: ActivityID (PK), CustomerID (FK referencing Customer), CampaignID (FK referencing MarketingCampaign).

21. **WineClub**:

   - Attributes: ClubID (PK), MemberID (FK referencing Customer), JoinDate, LeaveDate.

22. **ClubOfferedWine**:

- Attributes: OfferedWineID (PK), ClubID (FK referencing WineClub), WineID (FK referencing Wine).

23. **Reservation**:

- Attributes: ReservationID (PK), CustomerID (FK referencing Customer), RoomType, Event, CheckInDate, CheckOutDate.