

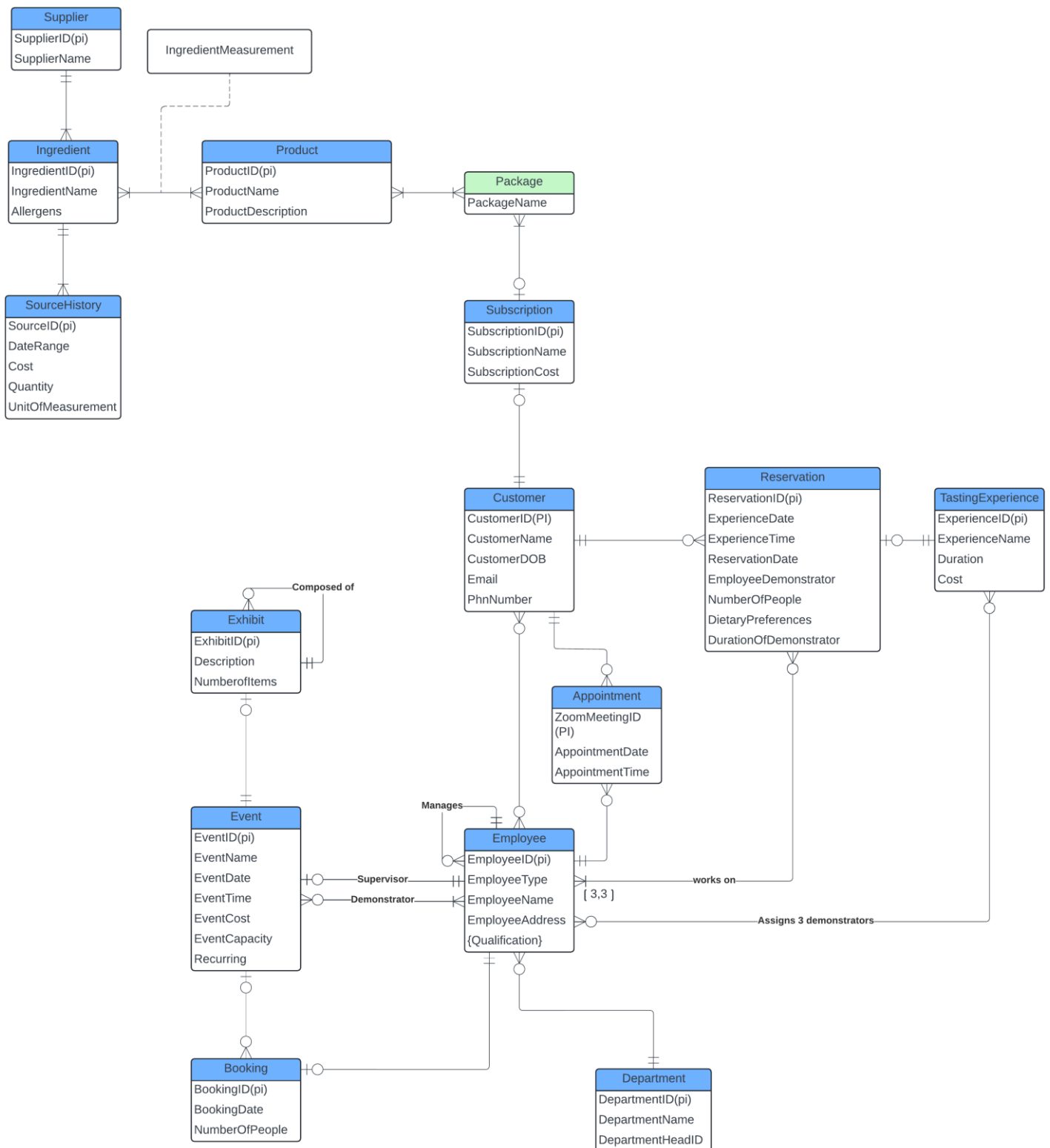
## COMP1350 Assignment

**Group Number:**

Student ID	Student Name
46978518	Tyler Johnson
48439401	Fadila Tahsina
48283665	Xian Hui Cai
48340979	MD Tanjil Alam Emon
48645265	Maskatul Hasan Alif

## Solutions:

### Task 1:



Task 2:

### **Step 1: Entities**

Subscription(SubscriptionID(pk), SubscriptionName, SubscriptionCost)  
Package(PackageID(pk), PackageName)  
Supplier(SupplierID(pk), SupplierName)  
Customer(CustomerID(pk), CustomerName, CustomerEmail, CustomerPhNum, DateOfBirth)  
Exhibit(ExhibitID(pk), Description, NumberOfItem)  
Product(ProductID(pk), ProductName, ProductDescription)  
Department(DepartmentID(pk), DepartmentName)  
Employee(EmployeeID(pk), EmployeeType, EmployeeName, EmployeeAddress)  
Ingredient(IngredientID(pk), IngredientName, Allergens)  
SourceHistory(SourceID(pk), StartDate, EndDate, Cost, Quantity, UnitOfMeasurement)  
Appointment(AppointmentID(pk), AppointmentDateTime)  
Reservation(ReservationID(pk), ReservationDateTime, NumberOfPeople, DurationOfDemonstrator, DietaryPreferences)  
TastingExperience(ExperienceID(pk), ExperienceName, Duration, Cost)  
eEvent(eEventID(pk), eEventName, eEventDateTime, eEventCost, eEventCapacity, Recurring)  
Booking(BookingID(pk), BookingDateTime, NumberOfPeople)

---

### **Step 2: Weak Entities**

No weak entities identified.

---

### **Step 3: 1-to-1 Relationships**

Department(DepartmentID(pk), DepartmentName, HeadEmployeeID(fk))  
CustomerSubscription(CustomerID(pk), SubscriptionID(fk))

---

### **Step 4: 1-to-N Relationships**

Employee(EmployeeID(pk), EmployeeType, EmployeeName, EmployeeAddress, DepartmentID(fk), ManagerID(fk))  
Ingredient(IngredientID(pk), IngredientName, Allergens, SupplierID(fk))  
SourceHistory(SourceID(pk), StartDate, EndDate, Cost, Quantity, UnitOfMeasurement, IngredientID(fk), SupplierID(fk))  
Appointment(AppointmentID(pk), AppointmentDateTime, EmployeeID(fk), CustomerID(fk))  
Reservation(ReservationID(pk), ReservationDateTime, NumberOfPeople, DurationOfDemonstrator, DietaryPreferences, CustomerID(fk))  
TastingExperience(ExperienceID(pk), ExperienceName, Duration, Cost, ReservationID(fk))  
eEvent(eEventID(pk), eEventName, eEventDateTime, eEventCost, eEventCapacity, Recurring, EmployeeID(fk), ExhibitID(fk))  
Booking(BookingID(pk), BookingDateTime, NumberOfPeople, EmployeeID(fk), eEventID(fk), CustomerID(fk))

---

**Step 5: M-to-N Relationships**

SubscriptionPackage(SubscriptionID(pk fk), PackageID(pk fk))

PackageProduct(PackageID(pk fk), ProductID(pk fk))

IngredientMeasurement(IngredientID(pk fk), ProductID(pk fk), Measurement, UnitOfMeasurement)

ReservationDemonstrator(ReservationID(pk fk), EmployeeID(pk fk))

WorksOn(ExperienceID(pk fk), EmployeeID(pk fk))

ExhibitComposition(ParentExhibitID(pk fk), ChildExhibitID(pk fk))

Demonstrate(EmployeeID(pk fk), eEventID(pk fk), Role)

HelpOut(CustomerID(pk fk), EmployeeID(pk fk))

cContains(ProductID(pk fk), IngredientID(pk fk))

---

**Step 6: Multivalued Attributes**

EmployeeQualification(EmployeeID(pk fk), EmployeeQualification(pk))

---

**Step 7: n-ary Relationships**

No n-ary relationships identified.

---

**Final Compiled List of All Tables in Their Most Up-To-Date Form**

- Subscription(SubscriptionID(pk), SubscriptionName, SubscriptionCost)
- Package(PackageID(pk), PackageName)
- Supplier(SupplierID(pk), SupplierName)
- Customer(CustomerID(pk), CustomerName, CustomerEmail, CustomerPhNum, DateOfBirth)
- Exhibit(ExhibitID(pk), Description, NumberOfItem)
- Product(ProductID(pk), ProductName, ProductDescription)
- Department(DepartmentID(pk), DepartmentName, HeadEmployeeID(fk))
- Employee(EmployeeID(pk), EmployeeType, EmployeeName, EmployeeAddress, DepartmentID(fk), ManagerID(fk))
- Ingredient(IngredientID(pk), IngredientName, Allergens, SupplierID(fk))
- SourceHistory(SourceID(pk), StartDate, EndDate, Cost, Quantity, UnitOfMeasurement, IngredientID(fk), SupplierID(fk))
- Appointment(AppointmentID(pk), AppointmentDateTime, EmployeeID(fk), CustomerID(fk))
- Reservation(ReservationID(pk), ReservationDateTime, NumberOfPeople, DurationOfDemonstrator, DietaryPreferences, CustomerID(fk))
- TastingExperience(ExperienceID(pk), ExperienceName, Duration, Cost, ReservationID(fk))
- eEvent(eEventID(pk), eEventName, eEventDateTime, eEventCost, eEventCapacity, Recurring, EmployeeID(fk), ExhibitID(fk))
- Booking(BookingID(pk), BookingDateTime, NumberOfPeople, EmployeeID(fk), eEventID(fk), CustomerID(fk))
- CustomerSubscription(CustomerID(pk), SubscriptionID(fk))
- SubscriptionPackage(SubscriptionID(pk fk), PackageID(pk fk))
- PackageProduct(PackageID(pk fk), ProductID(pk fk))

- IngredientMeasurement(IngredientID(pk fk), ProductID(pk fk), Measurement, UnitOfMeasurement)
- ReservationDemonstrator(ReservationID(pk fk), EmployeeID(pk fk))
- WorksOn(ExperienceID(pk fk), EmployeeID(pk fk))
- ExhibitComposition(ParentExhibitID(pk fk), ChildExhibitID(pk fk))
- Demonstrate(EmployeeID(pk fk), eEventID(pk fk), Role)
- HelpOut(CustomerID(pk fk), EmployeeID(pk fk))
- cContains(ProductID(pk fk), IngredientID(pk fk))
- EmployeeQualification(EmployeeID(pk fk), EmployeeQualification(pk))