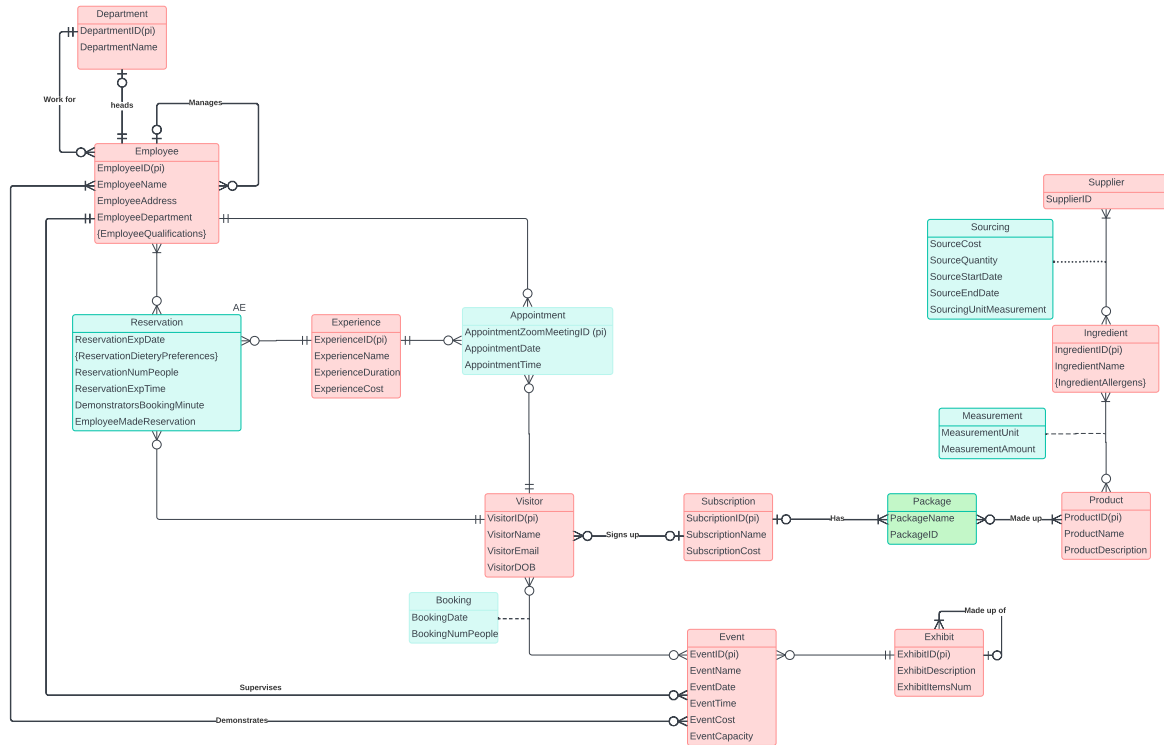# COMP1350 Assignment

Task 1:

// Insert your ERD here (you can make this page's orientation to horizontal)

Assumptions, if any:
- The Zoom ID for 'Appointment' changes every time and is the primary identifier for the Associative entity.
- ReservationDietaryPreferences in 'Reservation' is multi-valued since logically an individual could have multiple dietary preferences.
- Each subscription differs from the other subscriptions in the range so there will be a SubscriptionID to identify each subscription.
- An event must have at least one exhibit.
- Visitors can make the reservation if they want to.
- The suppliers' history will not be deleted and the supplier has changed at least once.
- If there is a group of visitors, one of them will represent the group and make the appointment.

Task 2:

// Type up the answers to your transformation & please don't forget to include your final tables here

Step 1: Strong entities

Department(**DepartmentID(pk),** DepartmentName)

Employee(**EmployeeID(pk),** EmployeeName, EmployeeAddress, EmployeeDepartment)

Experience(**ExperienceID(pk),** ExperienceName, ExperienceDuration, ExperienceCost)

Visitor(**VisitorID(pk),** VisitorName, VisitorEmail, VisitorDOB)

Subscription(**SubscriptionID(pk),** SubscriptionName, SubscriptionCost)

Event(**EventID(pk),** EventName, EventDate, EventTime, EventCost, EventCapacity)

Exhibit(**ExhibitID(pk),** ExhibitDescription, ExhibitItemsNum)

Product(**ProductID(pk),** ProductName, ProductDescription)

Ingredient(**IngredientID(pk),** IngredientName)

Supplier(**SupplierID(pk)**)

Step 2: Weak entities

Package(**SubscriptionID(pk,fk), PackageID(pk),** PackageName)

Step 3: One to one relationship (1:1)

DepartmentHeads(**DepartmentID(pk)**, DepartmentName, **EmployeeID(fk)**)

Step 4: One to many relationship (1:M)

Event(**EventID(pk), ExhibitID(fk),** EventName, EventDate, EventTime, EventCost, EventCapacity)

EmployeeManager(**EmployeeID(pk), ManagerID(fk)**, EmployeeName, EmployeeAddress, EmployeeDepartment)

WorksForDepartment(**EmployeeID(pk), DepartmentID(fk)**, EmployeeName, EmployeeAddress, EmployeeDepartment)

MultipleExhibit(**ExhibitID(pk), MadeUpOfID(fk),** ExhibitDescription, ExhibitItemsNum)

SubscriptionHasPackage(**SubscriptionID(pk,fk), PackageID(pk),** PackageName)

EventSupervisor(**EventID(pk),EmployeeID(fk)** ,EventName, EventDate, EventTime, EventCost, EventCapacity)

SubscriptionSignup(**VisitorID(pk),SubscriptionID(fk)** ,VisitorName, VisitorEmail, VisitorDOB)

Step 5: Many to many relationship (M:M)

IngredientSupplied(**SupplierID(pk,fk), IngredientID(pk, fk),** SourceCost, SourceQuantity, SourceStartDate, SourceEndDate, SourcingUnitMeasurement)

ProductContains(**ProductID(pk,fk), IngredientID(pk,fk)**, MeasurementUnit, MeasurementAmount)

ProductPackage(**ProductID(pk,fk), PackageID(pk, fk), SubscriptionID(pk,fk)**)

VisitorsAtEvent(**VisitorID(pk.fk), EventID(pk,fk),** BookingDate, BookingNumPeople)

EventDemonstrator(**EmployeeID(pk,fk)**, **EventID(pk,fk)**)

Step 6: Multivalued attributes

EmployeeQualifications(**EmployeeQualificationsID(pk)**, **EmployeeID(pk,fk)**)

IngredientAllergens(**IngredientAllergensID(pk)**, **IngredientID(pk,fk)**)

Step 7: Associative entities

Appointment(**AppointmentZoomMeetingID(pk),ExperienceID(fk), EmployeeID(fk), VisitorID(fk)** ,AppointmentDate, AppointmentTime)

Reservation(**ReservationID(pk)**, **ExperienceID(fk), VisitorID(fk)**, ReservationExpDate, ReservationNumPeople, ReservationExpTime, DemonstratorsBookingMinute, EmployeeMadeReservation)

Substep:

ReservationEmployee(**ReservationID(pk, fk), EmployeeID(pk,fk)**)

ReservationDieteryPreferences(**ReservationDieteryPreferencesID(pk), ReservationID(pk,fk)**)

Final set of table:

Department(**DepartmentID(pk)**, DepartmentName, **EmployeeID(fk)**)

Employee(**EmployeeID(pk), ManagerID(fk), DepartmentID(fk)**, EmployeeName, EmployeeAddress, EmployeeDepartment)

Reservation(**ReservationID(pk)**, **ExperienceID(fk), VisitorID(fk)**, ReservationExpDate, ReservationNumPeople, ReservationExpTime, DemonstratorsBookingMinute, EmployeeMadeReservation)

Appointment(**AppointmentZoomMeetingID(pk),ExperienceID(fk), EmployeeID(fk), VisitorID(fk)**, AppointmentDate, AppointmentTime)

Experience(**ExperienceID(pk),** ExperienceName, ExperienceDuration, ExperienceCost)

Visitor(**VisitorID(pk), SubscriptionID(fk)** ,VisitorName, VisitorEmail, VisitorDOB)

Subscription(**SubscriptionID(pk),** SubscriptionName, SubscriptionCost)

Event(**EventID(pk), ExhibitID(fk), EmployeeID(fk),** EventName, EventDate, EventTime, EventCost, EventCapacity)

Exhibit(**ExhibitID(pk), MadeUpOfID(fk),** ExhibitDescription, ExhibitItemsNum)

SubscriptionHasPackage(**SubscriptionID(pk,fk), PackageID(pk),** PackageName)

Product(**ProductID(pk),** ProductName, ProductDescription)

Ingredient(**IngredientID(pk),** IngredientName)

Supplier(**SupplierID(pk)**)

IngredientSupplied(**SupplierID(pk,fk), IngredientID(pk, fk),** SourceCost, SourceQuantity, SourceStartDate, SourceEndDate, SourcingUnitMeasurement)

ProductContains(**ProductID(pk,fk), IngredientID(pk,fk)**, MeasurementUnit, MeasurementAmount)

EventDemonstrator(**EmployeeID(pk,fk)**, **EventID(pk,fk)**)

VisitorsAtEvent(**VisitorID(pk.fk), EventID(pk,fk),** BookingDate, BookingNumPeople)

ProductPackage(**ProductID(pk,fk), PackageID(pk, fk), SubscriptionID(pk,fk)**)

ReservationEmployee(**ReservationID(pk, fk), EmployeeID(pk, fk)**)

EmployeeQualifications(**EmployeeQualificationsID(pk)**, **EmployeeID(pk,fk)**)

IngredientAllergens(**IngredientAllergensID(pk)**, **IngredientID(pk,fk)**)

ReservationDieteryPreferences(**ReservationDieteryPreferencesID(pk), ReservationID(pk, fk)**)