CP363: Databases I

Assignment #2

CP363, WLU, 2022

Instructor: Syed Nasir Daniel

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Q1:

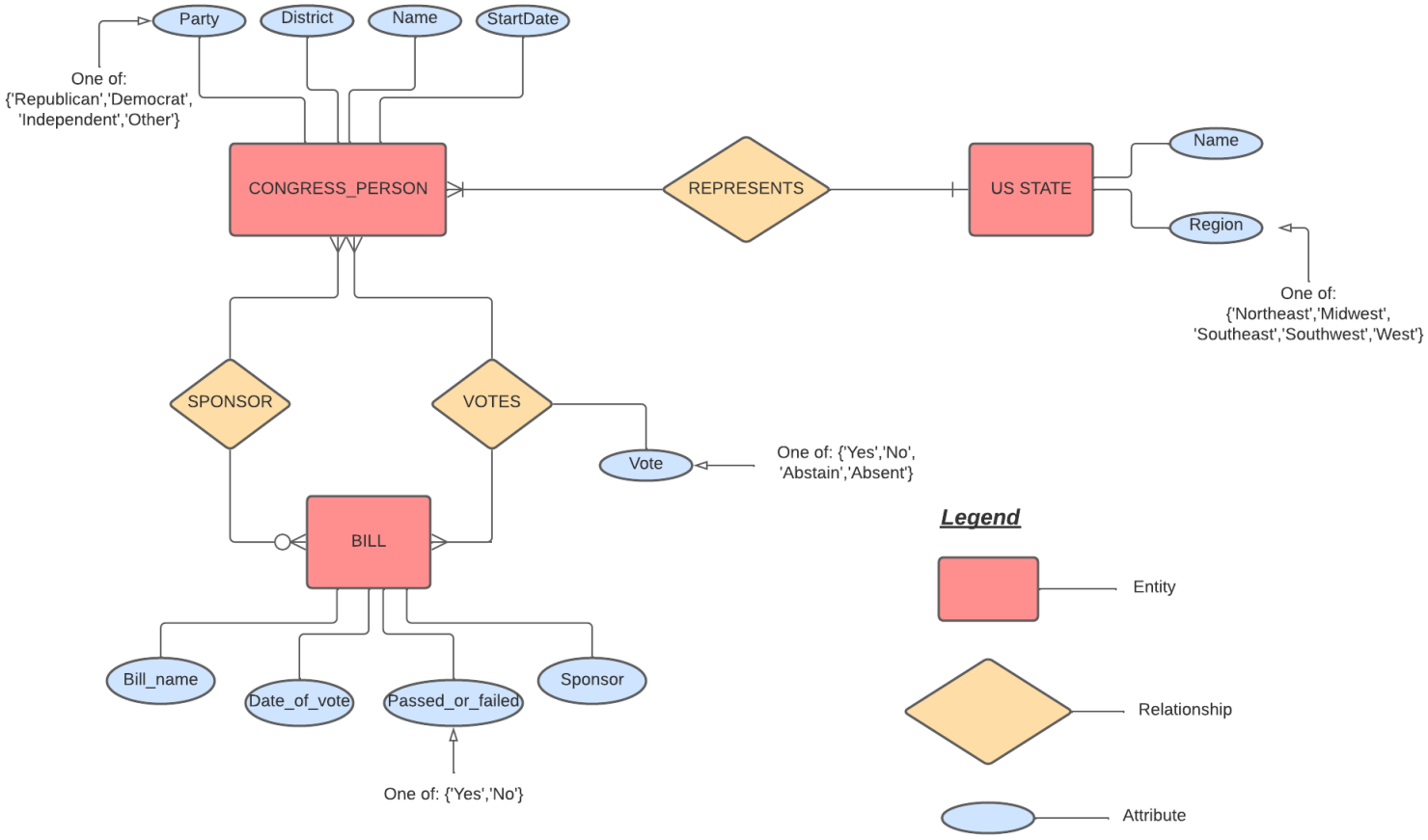

Figure 1: ER Schema for the U.S. House of Representatives

Q2:

*Extract from the ER Diagram at **least three requirements per entity** and at **least two constraints for values** that are used to produce this schema.*

AIRPORT
→ This Entity has a primary key for the Airport_code followed by attributes such as the Name of the airport and the state and city it is located in.

AIRPLANE_TYPE
→ This Entity has a primary key for the Type_name which identifies the unique name of what type of airplane it is. It also is followed by other attributes such Max_seats (maximum # of seats the airplane type has) and the Company that the airplane belongs to.

AIRPLANE
→ This Entity has a primary key for the airplane_id attribute and the total_no_of_seats attribute which indicates how many seats are available in the specific airplane

SEAT
→ This Entity has a primary key for the attribute Seat_no which identifies the unique number assigned to the seat. This entity has a relationship with reservation which will assign the Customer_name Attribute and Cphone (Customer Cellphone) with the unique Seat they are assigned

FLIGHT
→ This Entity has a primary key for the Number Attribute followed by the airline and weekdays attributes. This entity has a relationship with FARES which allows the users to identify the amount of the fare, any restrictions it may have and the unique code associated with the fare.

LEG_INSTANCE
→ This Entity has a primary key for the Date attribute followed by the no_of_avail_seats. This entity has a relationship where it is assigned to the Airplane entity.

Fare
→ This Entity has a primary key for the code attribute followed by the amount and restrictions attributes. This entity has a fares relationship with FLIGHT. This is to assign the fares of the flights for users to see how much it costs.

FLIGHT_LEG
→ This Entity has a primary key for the leg_no. It has a relationship instance with LEG_INSTANCE which shows the correlation if the flight were to have a particular occurrence of a LEG on a particular date of the flight

Q3(A):

EMPLOYEE(
{Prev_Job (Company_Name, Date_Joined(Day,Month,Year), End_Date(Day, Month, Year),
{Position(Title, Award_Month, Award_Year)},
{Salary(Basic_Pay, Allowances, Duration_Years, Grade)})})

Q3(B):

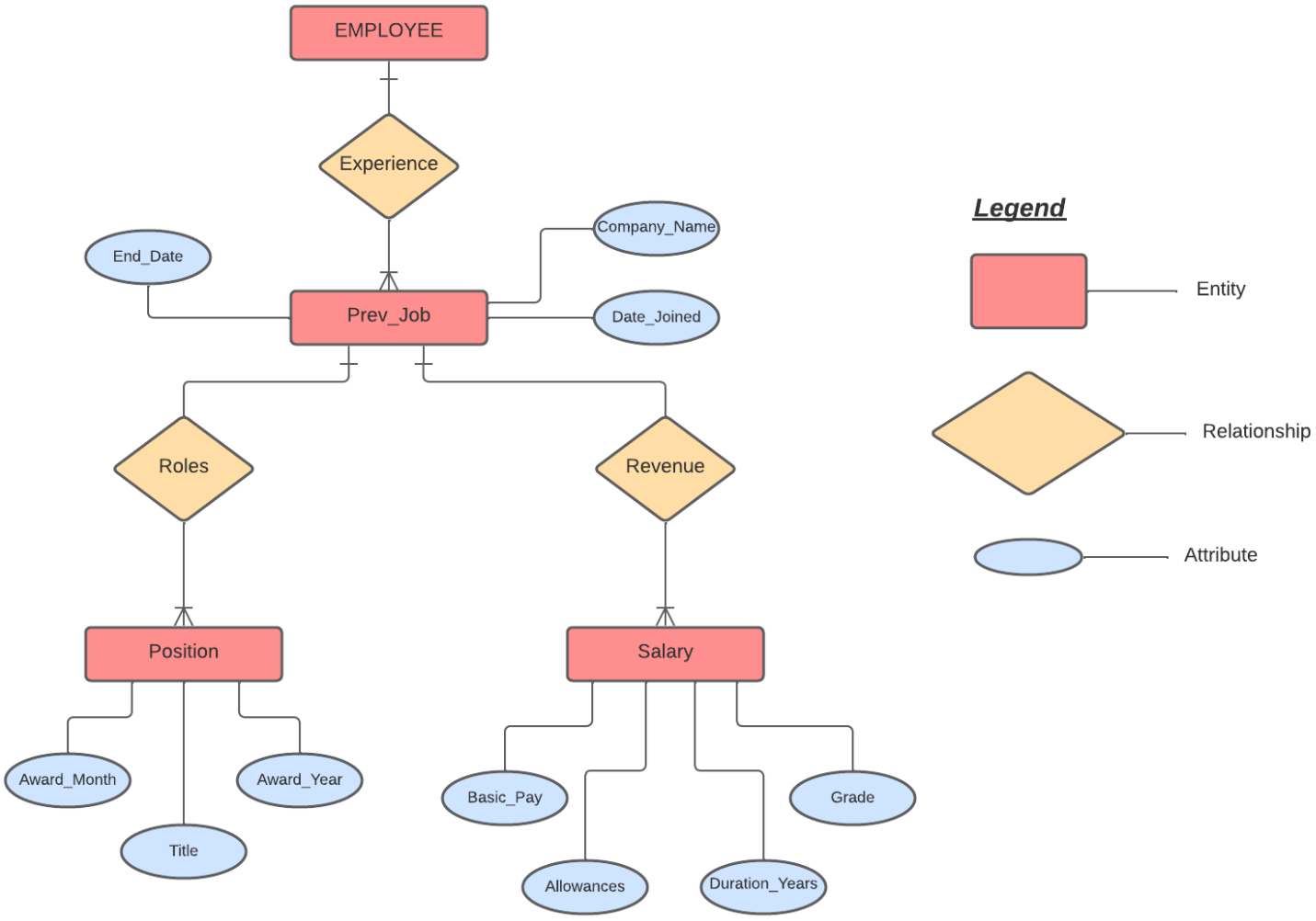

Figure 2: ER Schema to track an employee's previous job experiences