Salary Management System Database

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M1V1	10/5/2021
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Project Description

The Salary Management System Database will help organize a business' payroll and expenses. The Salary Management System Database will have three main roles of users: the owner, manager, and employee.

Accounts for the Salary Management System Database are created and set up by the owner and permitted individuals. Accounts will contain basic information such as their name, date of birth, wage, position, and etc. Changes to the account information must be done by the owner or permitted individuals. Users will only be able to change the password to their accounts.

The Salary Management System Database will monitor and record an employee's work hours. An employee will log on their account and self-document the number of hours they have worked. Employees will also be able to self-document hours worked overtime, but all the hours documented must be approved by a manager-level or higher user. For managers, the owner will be able to decide whether to allow managers to approve their own work hours or require the owner's approval.

The Salary Management System Database will be clean and concise. The Salary Management System Database will allow owners and designated users to view the total sum of salaries of a given time period and access an individual's information such as wage, hours worked, role, name, and etc. Owners and designated users will also be able to edit an user's information such as wage, role, and etc. Additionally, the Salary Management System Database will also keep a record on which salaries have been paid or are yet to be compensated and will have a system to pay employees.

Use Cases

1. Use Case: Create Accounts

   Actor: Manager (Ben), Employee (George)

   Description: Ben is an hiring manager for a seafood restaurant in the Bay Area. His previous cook quit the job a day before and Ben is now currently searching for a replacement. Ben interviews and hires George as the new cook for the restaurant. Before George's first day at work, Ben creates an account for him in the database. Ben creates the account for George. He assigned him as a cook, entered his wage, name, date of birth, gender and address. Ben gives George the username and password for his account, so George can log in and record the hours he has worked.

2. Use Case: Modifying an Account

   Actor: Manager (Ben), Employee (Jorge)

   Description: Jorge was given his account by his hiring manager, Ben. Jorge does not like the password he was given for his account. He decides he wants to change it to what he feels is more secure. Jorge changes his password and logs into his account with his new password. He notices his name was spelled as "George" instead of "Jorge". Jorge contacts Ben about the mistake and Ben promptly edits and fixes the mistake on his profile. During the start of his shift, Jorge clocks in from the account and clocks out when he is finished working.

3. Use Case: Approving Hours Worked

   Actor: Employee (Kyle), Manager (Tom), Owner (James)

   Description: Kyle is an elderly man and he has recently started working full-time at the movie theatres. Kyle has finished his first week at the theatres and has recorded a total of 50 hours for the week with no overtime hours. Payday is the following day, so Tom, his manager, begins the process of approving the hours recorded for the employees. He recalls that Kyle was only given 5 days, specifically, weekdays, with 8 hour shifts for that week, making it impossible for Kyle to have worked 50 hours for the week. Tom notifies Kyle about the situation and it was revealed that Kyle had forgotten to clock out during one of his shifts. Tom fixes and records the correct number of hours in the database. James, the owner of the movie theatres, has become increasingly busy throughout the year. Usually for managers like Tom, their hours are to be approved by the owner James, but since James is so busy and the managers have not wronged him since, James allows the managers to approve their own hours.

4. Use Case: Calculating Expenses

   Actor: Owner (Steve)

   Description: Steve owns a BMW car dealership. Steve has noticed that his business was not attracting a lot of customers. Despite buying an inflatable tube man a month before, his business still struggled to get people through the door. Eventually, Steve comes up with the idea to buy a billboard to advertise his

dealership. Billboards are a hefty investment, so Steve begins calculating his expenses for the following month. Luckily, Steve's salary management database system can review the total amount he paid his workers for the last month and the months before. Noticing a trend, Steven confidently hypothesizes how much he will need to pay his workers for the following month and decides to make the investment and he buys the billboard.

5. Use Case: Deactivating an Account

   Actors: Manager (Bob), Former Employee (Jeff)

   Description: Bob is a manager from a local arcade. Bob has recently fired Jeff and must delete his account. However, the information regarding his account must be saved in history before the account is deactivated. Additionally information is saved which contains their name, previous salaries, and any other necessary information. Saving the information would ensure no salaries become missing when an account is deactivated. After deactivation, Jeff will no longer be able to access his account, preventing him from clocking in and out which would result in recording fabricated hours worked.

6. Use Case: Pay Employees

   Actors: Employee (Alice)

   Description: Alice has recently started working at a bakery in the city. In order to be compensated for her work, Alice must link her bank account so she can be paid via direct deposit. Alice links her bank account and she is compensated for

the work she has done. The database recognizes Alice has been compensated so the system marks her as paid. Alice is currently not participating in a 401k plan and does not choose to save any of her money. Alice buys brand new shoes with the money she has earned.

7. Use Case: Multiple Roles

   Actors: Employee (Patrick)

   Description: Patrick has been working as a cashier in his local department store. Many employees have quit the week before, so the store is in need of a new janitor. Patrick has a lot of free time, so he was assigned extra work in the form of a couple shifts as a janitor. Patrick would now have two positions in his account, cashier and janitor. The positions have different wages, therefore, Patrick must now pick which position he would be working as before clocking in.

8. Use Case: Reimbursing Employees

   Actors: Employee (John), Manager (Amanada)

   Description: John has recently been hired as the new waiter for a popular pizzeria in California. The pizzeria was surprisingly busy one day and ran out of ingredients only a couple of hours after opening. John volunteers to drive to the nearby grocery store and buy more ingredients, given he is reimbursed. Amanda agrees and impressed with John’s attitude, she gives him a bonus. The following day John views his account and sees the reimbursement, bonus, and pay before income tax, along with his usual salary in his profile.

Database Requirements

1. **Business:**
    a. A business shall have many owners.
    b. A business must have many bank accounts.
    c. A business shall have many employees.
    d. A business shall make many payments.
    e. A business shall make many supplemental wages.
    f. A business shall make many reimbursements.
    g. A business shall have many addresses.
2. **Owner:**
    a. An owner shall own many businesses.
3. **Employee:**
    a. An employee shall own one and only one employee account.
    b. An employee shall log in to one and only one employee account.
    c. An employee shall work only one position at a time.
    d. An employee shall record their hours on one and only one employee account.
    e. An employee shall work at at least one business.
    f. An employee shall have at least one address.
    g. An employee shall have at least one bank account.
4. **Manager:**
    a. A manager shall be an employee.
    b. A manager shall manage at least one employee.
5. **Position:**
    a. A position shall be linked to many employee accounts.
    b. A position shall be performed by many employees.
6. **Salary:**
    a. A salary shall be linked to many employee accounts.
    b. A salary shall be linked with at most one income tax.
7. **Bank Account:**

a. A bank account shall be linked with one and only one employee or business.
b. A bank account is either a checking account or savings account.

8. Employee Account

a. An account shall be owned by at most one employee.
b. An account shall be unique.
c. An account shall record the work hours of at most one employee.
d. An account shall record many hours.
e. An employee account shall log in from many devices.
f. An employee account shall have many supplemental wages.
g. An employee account shall have many reimbursements.
h. An employee account shall have many positions.
i. An employee account shall have many salaries.
j. An employee account shall have many schedules.
k. An employee account shall receive many payments.
l. An employee account shall have at most one history.
m. An employee account shall have many wages.
n. An employe account shall have at most one 401k plan

9. Payment:

a. A payment type is either a bank account or check.
b. A payment shall be made by many businesses.
c. A payment shall be made to many employees.

10. Address:

a. An address shall be linked to many employees.
b. An address shall be linked to many businesses.

11. Schedule:

a. A schedule shall be linked to many employee accounts.

12. Bonus:

a. A bonus shall be given to many employee accounts.

13. Reimbursement:

a. A reimbursement shall be given to many employee accounts.
b. A supplemental wage shall be made by many businesses.

14. Overtime Hours:

a. Overtime hours shall be linked to many employee accounts.

15. Holiday Pay:

a. Holiday pay shall be linked to many employee accounts.

16. Vacation Pay/Paid Time Off:

a. Paid time off shall be linked to many employee accounts.

17. Supplemental Wages:

a. A supplemental wage is a bonus, overtime hours, holiday pay, and paid time off.
b. A supplemental wage shall be linked with at most one income tax.
c. A supplemental wage shall be made by many businesses.

18. Income Tax:

a. Income tax shall be linked to many states.
b. Income tax shall have many tax brackets
c. Income tax shall be given to.many salaries.
d. Income tax shall be given to many supplemental wages.

19. Tax Bracket:

a. A tax bracket shall have many ranges.
b. A tax bracket shall have many tax rates.
c. A tax bracket shall be linked with at most one income tax.

20. State:

a. A state shall have at most one income tax.
b. A state shall be unique.

21. History:

a. A history shall record many employee accounts.

22. Wage:

a. A wage shall be linked with many employee accounts.
b. A wage shall have at most one value.

23. 401k Plan:

a. A 401k plan shall be linked with many employee accounts.

Detailed List of Main Entities, Attributes and Keys

1. Business (strong)
    - id: key,numeric
    - business_name: composite, alphanumeric
    - business_description: alphanumeric
    - created: multivalue, timestamp
2. Owner (strong)
    - id: key,numeric
    - owner_name: composite, alphanumeric
    - owner_dob: mutivalue, timestamp
    - contact_info: composite, alphanumeric
3. Employee (weak)
    - id: key,numeric
    - employee_name: composite, alphanumeric
    - employee_dob: multivalue, timestamp
    - employee_gender: alphanumeric
4. Manager (weak)
    - id: key,numeric
    - manager_type: alphanumeric
    - description: alphanumeric
5. Position (strong)
    - id: key,numeric
    - position_rank:alphanumeric
    - position_description: alphanumeric.
    - position_name: alphanumeric
6. Salary (strong)
    - id: key, numeric
    - salary_amount: numeric

- year: numeric

7. Bank Account (weak)
    - id: key, numeric
    - bank_account_number: numeric
    - bank_routing_number: numeric
    - bank_name: alphanumeric
8. Employee Account (strong)
    - id: key, numeric
    - created by: alphanumeric
    - created: multivalue, timestamp
    - modified: multivalue, timestamp
9. Payment (strong)
    - id: key,numeric
    - payment_name: alphanumeric
    - payment_to: alphanumeric
    - payment_from: alphanumeric
    - payment_description: alphanumeric
    - payment_ammount: numeric
    - created: multivalue, timestamp
10. Address (strong)
    - id: key,numeric
    - zip code: numeric
    - city: alphanumeric
    - street: alphanumeric
    - country: alphanumeric
    - state: alphanumeric
11. Schedule (strong)
    - id: key, numeric
    - days: multivalue, alphanumeric
    - start: composite, timestamp
    - end: composite, timestamp
12. Bonus (weak)
    - id: key,numeric
    - bonus_description: alphanumeric

- bonues_name: alphanumeric
- amount: numeric

13. Reimbursement (strong)
    - id: key,numeric
    - reimbursement_name: alphanumeric
    - reimbursement_description: alphanumeric
    - amount: numeric
14. Overtime Hours (weak)
    - id: key,numeric
    - bonus_description: alphanumeric
    - bonus_amount: numeric
15. Holiday Pay (weak)
    - id: key,numeric
    - amount: numeric
    - day: alphanumeric
    - start: composite, timestamp
    - end: composite, timestamp
16. Vacation Pay/Paid Time Off (weak)
    - id: key,numeric
    - PTO_description: alphanumeric
    - amount: numeric
    - PTO_start: composite, timestamp
    - PTO_end: composite, timestamp
17. Supplemental Wages (strong)
    - id: key,numeric
    - Supplemental_wage_type: alphanumeric
    - tax_id: weak key, numeric
18. Income Tax (strong)
    - id: key,numeric
    - untaxed_amount: numeric
    - taxed_amount: numeric
19. Tax Bracket (strong)
    - id: key,numeric

- tax_rate: value
- salary_range_start: numeric
- salary_range_end: numeric

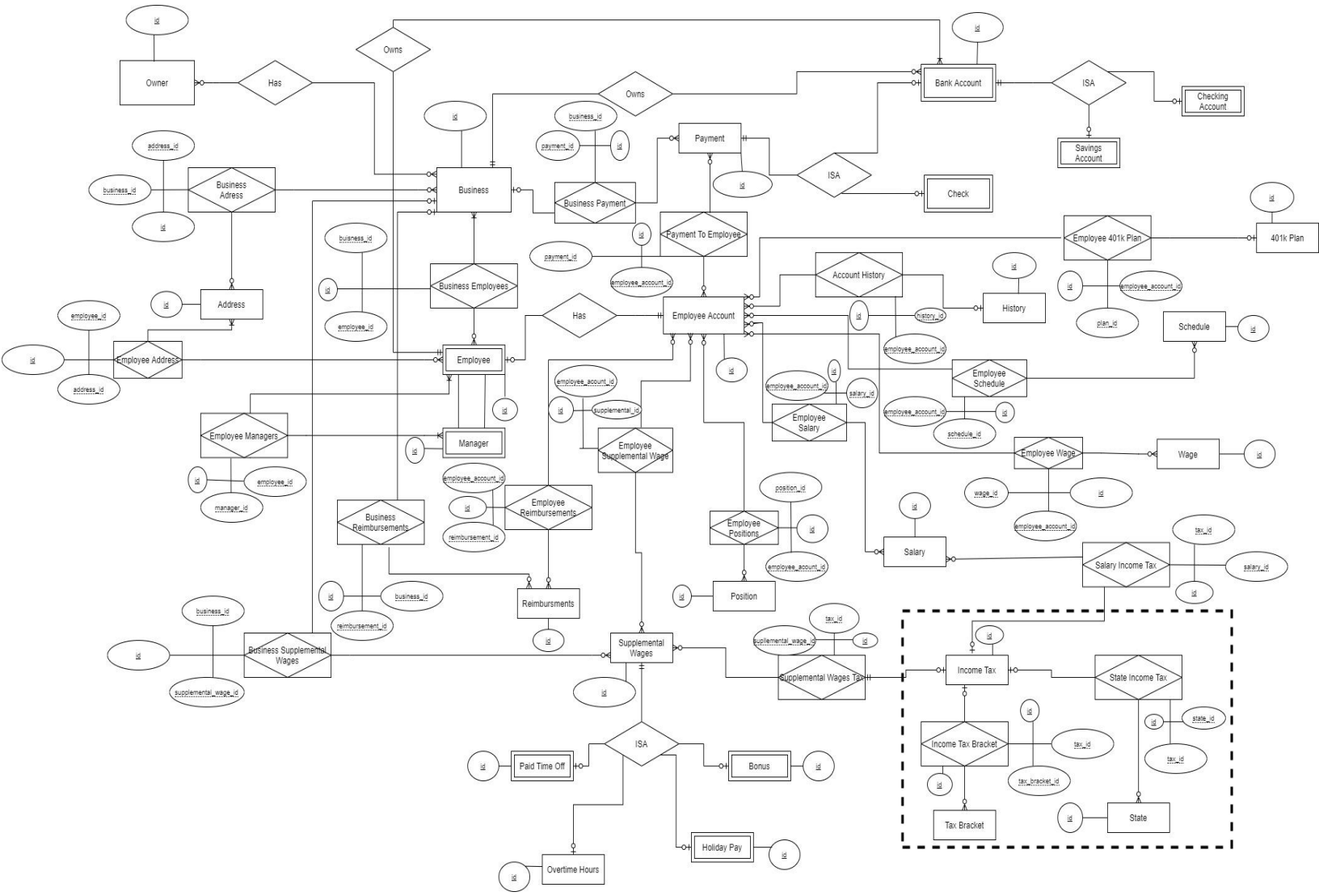
20. State (strong)
    - id: key,numeric
    - name: alphanumeric
    - tax_id: key, numeric
    - region: alphanumeric
21. History (strong)
    - id: key,numeric
    - created: multivalue, timestamp
    - modified: multivalue, timestamp
22. Wage (strong)
    - id: key, numeric
    - amount: numeric
    - created: multivalue, timestamp
    - modified: multivalue, timestamp
23. 401k Plan (strong)
    - id: key, numeric
    - percentage: numeric
    - amount: numeric
24. Employee Positions (weak)
    - id: key,numeric
    - employee_account_id: weak key, numeric
    - position_id: weak key, numeric.
25. Employee Supplemental Wages (weak)
    - id: key,numeric
    - employee_account_id: key, numeric
    - supplemental_id: weak key, numeric.
26. Employee Reimbursements (weak)
    - id: key,numeric
    - employee_account_id: weak key, numeric
    - reimbursment_id: weak key, numeric.

27. Business Address (weak)
    - id: key,numeric
    - business_id: weak key, numeric
    - address_id: weak key, numeric
28. Employee Address (weak)
    - id: key,numeric
    - employee_id: weak key,numeric
    - address_id: weak key,numeric
29. Business Payment (weak)
    - id: key,numeric
    - business_id: weak key,numeric
    - payment_id: key, numeric
30. Payment To Employee (weak)
    - id: key,numeric
    - employee_account_id: weak key, numeric
    - payment_id: key, numeric
31. Employee Salary (weak)
    - id:key,numeric
    - employee_id: weak key,numeric
    - salary_id: weak key,numeric
32. Employee Schedule (weak)
    - id:key,numeric
    - employee_id: weak key, numeric
    - schedule_id: weak key, numeric
33. Business Reimbursements (weak)
    - id: key,numeric
    - buisness_id: weak key,numeric
    - reimbursment_id: weak key, numeric.
34. Business Supplemental Wages (weak)
    - id: key,numeric
    - buisness_id: weak key,numeric
    - supplemental__wage_id: key, numeric.

35. Employee Account History (weak)
    - id: key, numeric
    - account_id: weak key,numeric
    - history_id: key,numeric
36. Salary Income Tax (weak)
    - id: key, numeric
    - salary_id: weak key, numeric
    - tax_id: weak key, numeric
37. Supplemental Wages Tax (weak)
    - id: key, numeric
    - supplemental_wage_id: key, numeric
    - tax_id: weak key, numeric
38. State Income Tax (weak)
    - id: key, numeric
    - state_id: key, numeric
    - tax_id: key, numeric
39. Income Tax Bracket (weak)
    - id: key, numeric
    - tax_bracket_id: weak key, numeric
    - tax_id: weak key, numeric
40. Employee Wage (weak)
    - id:key,numeric
    - account_id: weak key, numeric
    - wage_id: weak key, numeric
41. Business Employees (weak)
    - id: key, numeric
    - employee_id: weak key, numeric
    - buisness_id: weak key, numeric
42. Employee Managers (weak)
    - id: key, numeric
    - manager_id: weak key, numeric
    - employee_id: weak key, numeric

43. Employee 401k Plan
    - id: key, numeric
    - plan_id: weak key, numeric
    - employee_id: weak key, numeric

Entity Relationship Diagram (ERD)



Testing Table

Rule	Entity A	Relation	Entity B	Cardinality	Pass/Fail	Error Description
1	Owner	Has	Business	M-to-M	Pass	None
2	Business	Has	Owner	M-to-M	Pass	None
3	Business	Has	Employees	M-to-N	Pass	None
4	Employee	Works at	Business	M-to-N	Pass	None
5	Business	Has	Address	M-to-1	Fail	A business can have many branches located in many addresses.
6	Address	Contains	Business	M-to-N	Pass	None
7	Employee	Has	Address	1-to-1	Fail	An employee can have many different addresses. Also an address can have multiple employees, such as a family who works at the same business.
8	Address	Contains	Employees	M-to-N	Pass	None
9	Business	Owns	Bank Account	1-to-M	Pass	None
10	Bank Account	Owned by	Business	M-to-1	Pass	None
11	Employee	Owns	Bank Account	1-to-M	Pass	None
12	Bank Account	Owned by	Employee	M-to-1	Pass	None
13	Bank Account	ISA	Checking Account	1-to-1	Pass	None
14	Bank Account	ISA	Savings Account	1-to-1	Pass	None

15	Payment	ISA	Check	1-to-1	Pass	None
16	Payment	ISA	Bank Account	1-to-1	Pass	None
17	Manager	ISA	Employee	1-to-1	Pass	None
18	Business	Makes	Payment	M-to-M	Fail	There should be at most one business making payments.
19	Payment	Made by	Business	M-to-1	Pass	None
20	Employee	Receives	Payment	M-to-M	Pass	None
21	Payment	Received by	Employee	M-to-M	Pass	None
22	Employee	Has	Account	1-to-M	Fail	Account shall be only linked to at most one employee
23	Account	Has	Employee	1-to-1	Pass	None
24	Employee Account	Has	Position	M-to-1	Fail	Employees can have many positions within the same business.
25	Position	Linked With	Employee	N-to-M	Pass	None
26	Position	Has	Salary	M-to-1	Fail	Same position does not always equate to the same salary. For example a senior should have a higher salary than a beginner.
27	Employee Account	Has	Salary	M-to-M	Pass	None
28	Salary	Linked With	Employee Account	M-to-M	Pass	None
29	Employee Account	Has	Schedule	M-to-M	Pass	None
30	Schedule	Linked	Employee	M-to-N	Pass	None

		With	Account			
31	Employee Account	Receives	Supplemental Wage	M-to-N	Pass	None
32	Supplemental Wage	Received by	Employee Account	M-to-N	Pass	None
33	Employee Account	Receives	Reimbursement	M-to-N	Pass	None
34	Reimbursement	Received by	Employee Account	M-to-M	Pass	None
35	Paid Time Off	ISA	Supplemental Wage	1-to-1	Pass	None
36	Overtime Hours	ISA	Supplemental Wage	1-to-1	Pass	None
37	Bonus	ISA	Supplemental Wage	1-to-1	Pass	None
38	Holiday Pay	ISA	Supplemental Wage	1-to-1	Pass	None
39	Business	Makes	Reimbursement	1-to-M	Pass	None
40	Reimbursement	Made by	Business	M-to-1	Pass	None
41	Business	Makes	Supplemental Wage	1-to-M	Pass	None
42	Supplemental Wage	Made by	Business	M-to-1	Pass	None
43	Employee Account	Has	Account History	1-to-1	Fail	Many accounts shall be recorded in at most one history
44	Account History	Linked With	Employee Account	1-to-1	Fail	Many employees shall be recorded by at most one history.
45	Manager	Manages	Employees	Recursive	Fail	Employees can have multiple managers.
46	Employee	Managed by	Manager	Recursive	Pass	None

47	Supplemental Wages	Taxed by	Income Tax	M-to-1	Pass	None
48	Income Tax	Taxes	Supplemental Wages	1-to-M	Pass	None
49	State	Has	Income Tax	M-to-1	Pass	None
50	Income Tax	Linked With	State	1-to-M	Pass	None
51	Income Tax	Taxes	Salary	1-to-M	Pass	None
52	Salary	Taxed by	Income Tax	M-to-1	Pass	None
53	Income Tax	Has	Tax Bracket	1-to-M	Pass	None
54	Tax Bracket	Linked with	Income Tax	M-to-1	Pass	None
55	Employee Account	Has	Wage	M-to-1	Fail	An employee account can have two wages, depending on how many positions they work.
56	Wage	Linked With	Employee Account	M-to-N	Pass	None
57	Employee Account	Has	401k Plan	M-to-1	Pass	None
58	401k Plan	Linked with	Employee Account	1-to-M	Pass	None

Database Model/EER

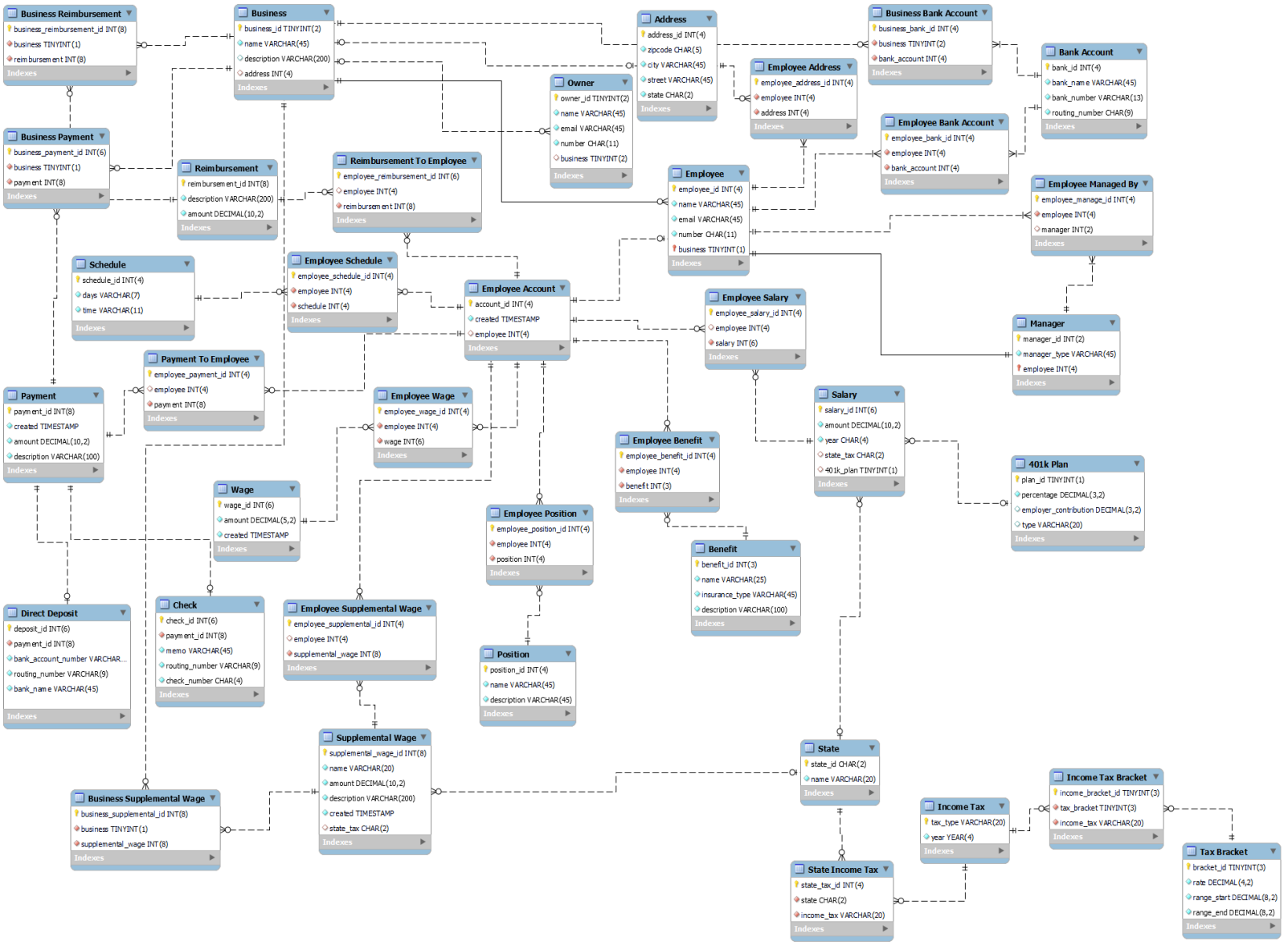


Table	FK	On Delete	On Update	Comment
Business	address	SET NULL	ON CASCADE	If an address is deleted then the business would have no address until a new one is assigned. In case a business relocates to a different location keeping all staff members.
Employee	business	ON CASCADE	ON CASCADE	If a business is deleted, we no longer need employees.
Employee Address	employee	ON CASCADE	ON CASCADE	If an employee is deleted we no longer need their addresses in the employee address table.
Employee Address	address	ON CASCADE	ON CASCADE	If an address is deleted we can remove the rows since it is an associative entity.
Employee Bank Account	employee	ON CASCADE	ON CASCADE	If an employee is deleted we no longer need their bank account information in the employee bank account table.
Employee Bank Account	bank account	ON CASCADE	ON CASCADE	If a bank account is deleted we can just remove the rows since the table is for an associative entity.
Business Bank Account	business	ON CASCADE	ON CASCADE	If a business is deleted we no longer need to hold their bank account information.
Business Bank Account	bank account	ON CASCADE	ON CASCADE	If a business' bank account is removed then we can remove the rows.
Manager	employee	ON CASCADE	ON CASCADE	Since manager is an employee if that employee is deleted then
Employee Managed By	employee	ON CASCADE	ON CASCADE	We no longer need that entry in the table if an employee is deleted.
Employee Managed By	manager	SET NULL	ON CASCADE	In case we want to fire a manager and assign the next new manager the same employees.
Employee Account	employee	SET NULL	ON CASCADE	In case we want to keep the record of the employee despite the

				employee being deleted.
Employee Schedule	employee account	ON CASCADE	ON CASCADE	If an employee account is deleted we no longer need their schedule.
Employee Schedule	schedule	ON CASCADE	ON CASCADE	If a schedule is deleted we can delete the entry.
Reimbursement To Employee	employee account	SET NULL	ON CASCADE	If an employee account is deleted, we may want to keep the reimbursements they received.
Reimbursement To Employee	reimbursement	ON CASCADE	ON CASCADE	If a reimbursement is deleted, then we no longer need to keep track of it.
Business Reimbursement	business	ON CASCADE	ON CASCADE	If an business is deleted, we no longer need the list of reimbursements made
Business Reimbursement	reimbursement	ON CASCADE	ON CASCADE	If a reimbursement is deleted, then we no longer need to keep track of it
Business Payment	business	ON CASCADE	ON CASCADE	If a business is deleted, we no longer need the list of payments made.
Business Payment	payment	ON CASCADE	ON CASCADE	If a payment is deleted, then we no longer need to keep track of it
Payment To Employee	employee account	SET NULL	ON CASCADE	If an employee account is deleted, we may want to keep the payments they received.
Payment To Employee	payment	ON CASCADE	ON CASCADE	If a payment is deleted, then we no longer need to keep track of it.
Employee Wage	employee account	ON CASCADE	ON CASCADE	If an employee account is deleted we no longer need its wage.
Employee Wage	wage	ON CASCADE	ON CASCADE	If a wage is deleted we can just delete it.
Employee Salary	employee account	SET NULL	ON CASCADE	We may want to keep records of the salaries.
Employee Salary	salary	ON CASCADE	ON CASCADE	If a salary is deleted we no longer need it.
Salary	state	SET NULL	ON	If a state is deleted we would still

			CASCADE	need the salary entry.
Salary	401k plan	SET NULL	ON CASCADE	If a 401k plan is deleted we still need salary entry.
Employee Benefit	employee account	ON CASCADE	ON CASCADE	If an employee account is deleted we no longer need to keep track of their benefits.
Employee Benefit	benefit	ON CASCADE	ON CASCADE	If a benefit is deleted we can remove all the entries that contain that benefit.
Employee Position	employee account	ON CASCADE	ON CASCADE	If an employee account is deleted we no longer need their positions .
Employee Position	position	ON CASCADE	ON CASCADE	If a position is deleted then we can remove all the entries that point to that position.
Direct Deposit	payment	ON CASCADE	ON CASCADE	If a payment is deleted we no longer need the direct deposit.
Check	payment	ON CASCADE	ON CASCADE	If a payment is deleted we no longer need a check.
Supplemental Wage	state	SET NULL	ON CASCADE	If the state is deleted we still need supplemental wage entry.
Employee Supplemental Wage	employee account	SET NULL	ON CASCADE	If an employee account is deleted, we may want to keep supplemental wages to that account.
Employee Supplemental Wage	supplemental wage	ON CASCADE	ON CASCADE	If a supplemental wage is deleted we no longer need it.
Business Supplemental Wage	business	ON CASCADE	ON CASCADE	If a business is deleted we no longer need to keep track.
Business Supplemental wage	supplemental wage	ON CASCADE	ON CASCADE	If a supplemental wage is deleted we no longer need it.
Income Tax Bracket	tax bracket	ON CASCADE	ON CASCADE	If the tax bracket is deleted we no longer need the income tax bracket.

Income Tax Bracket	income tax	ON CASCADE	ON CASCADE	If income tax is deleted we no longer need the tax brackets for that income tax.
State Income Tax	state	ON CASCADE	ON CASCADE	If a state is deleted we no longer need the income taxes associated with that state.
State Income Tax	income tax	ON CASCADE	ON CASCADE	If an income tax is deleted, then the state no longer needs income tax.

Section XI: Testing Table

Entity	SQL Query	Pass/Fail	Error Description	Possible Solution
Owner	Delete	Pass	None	None
Owner	Update	Pass	None	None
Business	Delete	Pass	None	None
Business	Update	Pass	None	None
Employee	Delete	Pass	None	None
Employee	Update	Pass	None	None
Address	Delete	Pass	None	None
Address	Update	Pass	None	None
Employee Address	Delete	Pass	None	None
Employee Address	Update	Pass	None	None
Bank Account	Delete	Pass	None	None
Bank Account	Update	Pass	None	None
Business Bank Account	Delete	Pass	None	None
Business Bank Account	Update	Pass	None	None
Employee Bank Account	Delete	Pass	None	None
Employee Bank Account	Update	Pass	None	None
Employee	Delete	Pass	None	None

Account				
Employee Account	Update	Pass	None	None
Schedule	Delete	Pass	None	None
Schedule	Update	Pass	None	None
Employee Schedule	Delete	Pass	None	None
Employee Schedule	Update	Fail	Error #1. Foreign Key constraint	We were updating an employee's schedule and that employee’s entry was deleted from the delete statement. Which works properly since if an employee account is deleted they should no longer have any schedules.
Position	Delete	Pass	None	None
Position	Update	Pass	None	None
Employee Position	Delete	Pass	None	None
Employee Position	Update	Pass	None	None
Benefit	Delete	Pass	None	None
Benefit	Update	Pass	None	None
Employee Benefit	Delete	Pass	None	None
Employee Benefit	Update	Pass	None	None
Wage	Delete	Pass	None	None
Wage	Update	Pass	None	None

Employee Wage	Delete	Pass	None	None
Employee Wage	Update	Pass	None	None
Payment	Delete	Pass	None	None
Payment	Update	Pass	None	None
Direct Deposit	Delete	Pass	None	None
Direct Deposit	Update	Pass	None	None
Check	Delete	Pass	None	None
Check	Update	Pass	None	None
Payment To Employee	Delete	Pass	None	None
Payment To Employee	Update	Pass	None	None
Business Payment	Delete	Pass	None	None
Business Payment	Update	Pass	None	None
Reimbursement	Delete	Pass	None	None
Reimbursement	Update	Pass	None	None
Reimbursement To Employee	Delete	Pass	None	None
Reimbursement To Employee	Update	Fail	Error #2. Foreign Key constraint fails.	We were updating a deleted entry. Possible solution would be to not try to update a deleted entry.
Business Reimbursement	Delete	Pass	None	None

Business Reimbursement	Update	Pass	None	None
Tax Bracket	Delete	Pass	None	None
Tax Bracket	Update	Pass	None	None
Income Tax	Delete	Pass	None	None
Income Tax	Update	Pass	None	None
Income Tax Bracket	Delete	Pass	None	None
Income Tax Bracket	Update	Pass	None	None
State	Delete	Pass	None	None
State	Update	Pass	None	None
State Income Tax	Delete	Fail	Error #3. Truncated incorrect table value	I forgot I changed the primary key to CHAR(2).
State Income Tax	Update	Fail	Error #4. Foreign key constraint fails	Not entirely sure why this is failing, but a possible solution might be the way I am referencing the state.
401k Plan	Delete	Fail	Unknown column 'employer_contribution' in 'where clause'	Changed key name to “employer_contribution”
401k Plan	Update	Fail	Duplicate entry for type unique	Removed unique requirement as it did not make sense
Salary	Delete	Pass	None	None
Salary	Update	Pass	None	None
Employee Salary	Delete	Pass	None	None
Employee Salary	Update	Pass	None	None

Supplemental Wage	Delete	Pass	None	None
Supplemental Wage	Update	Pass	None	None
Employee Supplemental Wage	Delete	Pass	None	None
Employee Supplemental Wage	Update	Pass	None	None
Business Supplemental Wage	Update	Pass	None	None
Business Supplemental Wage	Delete	Pass	None	None
Manager	Update	Pass	None	None
Manager	Delete	Pass	None	None
Employee Managed By	Update	Pass	None	None
Employee Managed By	Delete	Fail	Error #5. Foreign Key constraint fails.	Not entirely sure why this is failing, but a possible solution might be the way I am referencing the employee.