

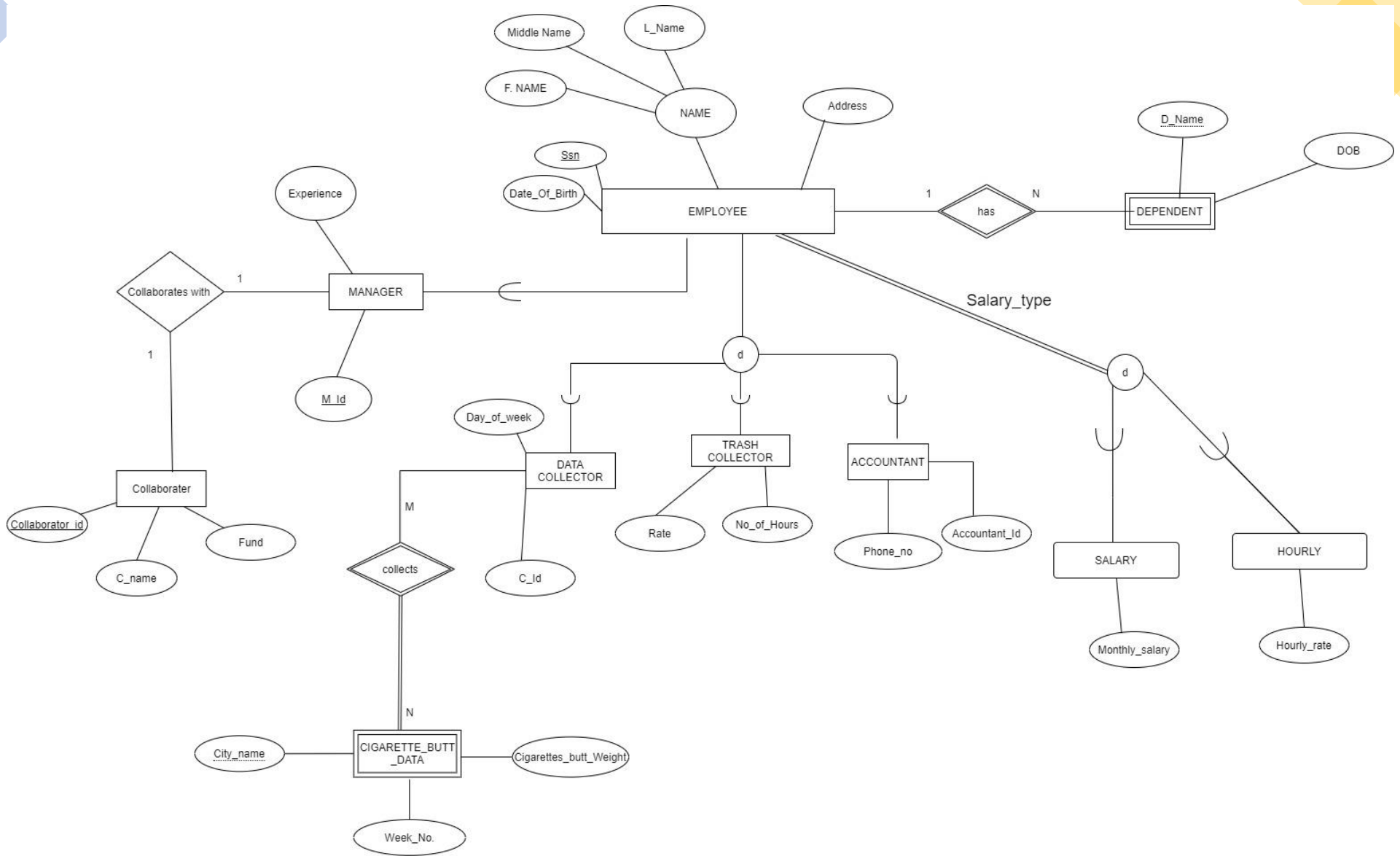


Project 1 Phase 2 By Team 2

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Requirements for Mini World

- Our mini-world is "Reducing Cigarettes Butts".
- Its entities are Employee, Dependent, Collaborator
- Employee -> superclass
 - Data Collector, Trash Collector, Accountant , Manager -> subclass
 - These subclass can have its own unique attribute
 - Subclass inherits attributes from superclass
 - For instance: Data Collector - has date as unique attribute and inherits all attributes of employee superclass.



Entities, Attributes and Relationships

- Employee - > name, address, Date of birth and SSN ('primary key'), address
- Dependent - weak entity type -> D_name and DOB. .

Employee has three disjoint subclasses

- Accountant -> Phone number and Accountant_ID
- Trash Collector -> Number of Hours and Rate
- Data Collector -> C_ID and Day_of_week

Entity and Attributes Continued

- Salaried Employee -> Monthly_salary
- Hourly Employee -> Pay Scale
- Manager -> Experience and M_ID
- Collaborator -> Collaborator name and Fund
- Cigarette Butt Data -> City Name , Cigarette butt weight and Week number

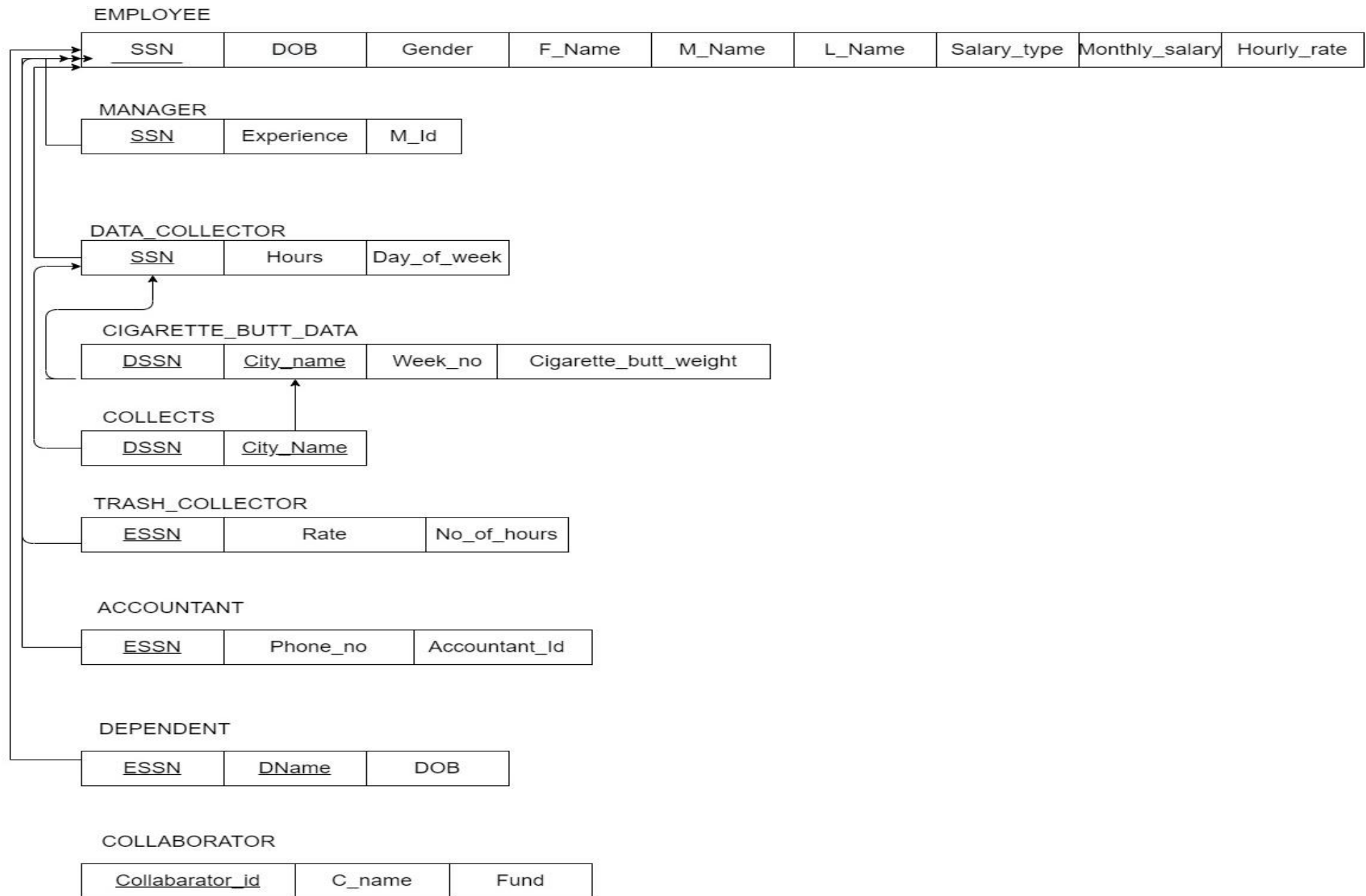
Relationships

- Manager Collaborates with a Collaborator. -> **one-one**
- Employee has Dependent -> **one to many**
 - Employee could have multiple dependent
- Data collector collects Cigarette butt data -> **many- many**
 - Mutiple data collector can collect multiple cigarette butt data

Weak entity

- Those entity which cannot be uniquely identified by its attributes alone.
- Some weak entities in our databases are
 - **Cigarette butt**- needs data collector to identify itself
 - **Dependent**- needs employee to be identified

Schema



EMPLOYEE

SSN	DOB	Gender	F_Name	M_Name	L_Name	Salary_type	Monthly_salary	Hourly_rate
012-47-9928	08/07/1996	Male	John	Kumar	Smith	Yearly	5000	50
045-29-0987	09/02/1975	Female	Linda	Maya	Thapa	Hourly	3000	30

MANAGER

SSN	Experience	M_Id
012-47-9928	2	4

DATA_COLLECTOR

SSN	Hours	Day_of_week
045-29-0987	15	Monday
055-33-0987	25	Tyesday

CIGARETTE_BUTT_DATA

DSSN	City_name	Week_no	Cigarette_butt_weight
045-29-0987	Arlington	1	20 lb
055-33-0989	Arlington	2	40 lb

COLLECTS

DSSN	City_Name
-98-00-2678	Arlington
078-89-2678	Dallas

TRASH_COLLECTOR

ESSN	Rate	No_of_hours
098-2178-2325	\$12.00	12
512-8987-4587	\$15.00	22

ACCOUNTANT

ESSN	Phone_no	Accountant_Id
678-92-3434	(720)- 609-4700	985-613-2

DEPENDENT

ESSN	DName	DOB
678-92-3434	Meera	01/01/1995

COLLABORATOR

Collabarator_id	C_name	Fund
0023	SmokeyTreats	20000

Reference

- Schema and EER made from draw.io



Questions?