



AMERICAN INTERNATIONAL UNIVERSITY –BANGLADESH

INTRODUCTION TO DATABASE

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SECTION: H

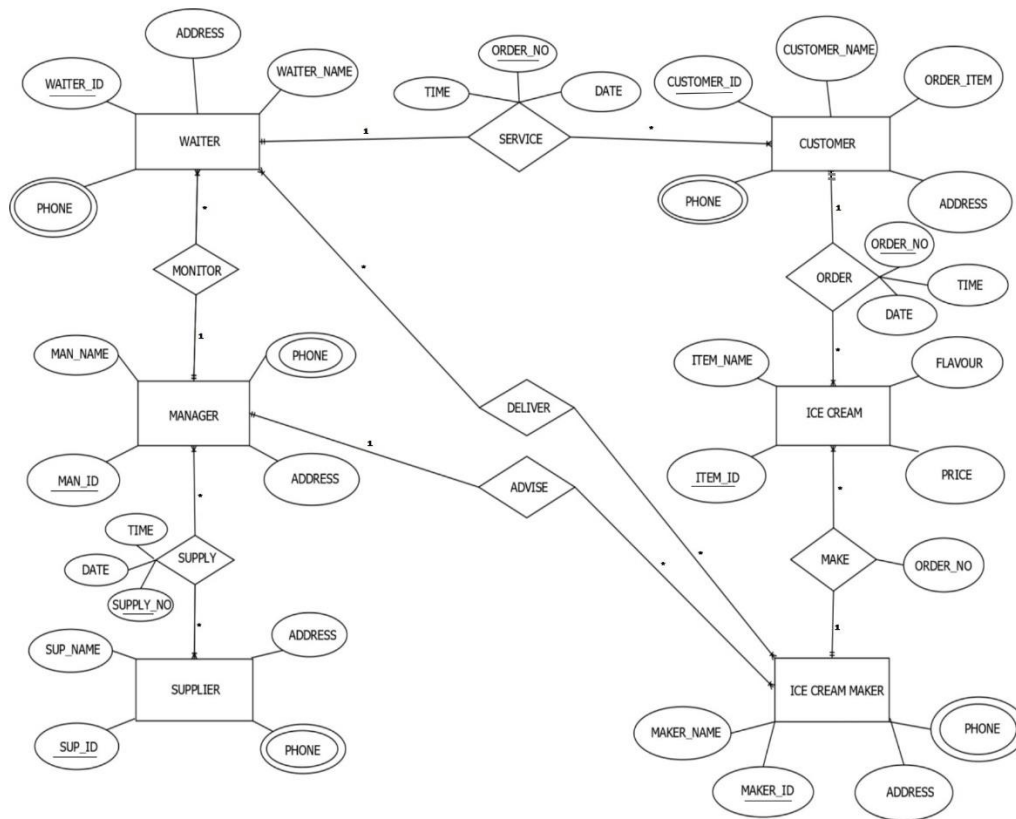
PROJECT

PROJECT TITLE: ICE CREAM SHOP MANAGEMENT SYSTEM

INTRODUCTION

Waiter is identified by waiter_id,Address,Waiter_name and phone number. **Manager** is identified by Manager_name,Manager_id,Address and phone number.Then the **Supplier** is Identified by supplier_name,supplier_id,address and phone number.**Customer** is identified by customer_id,customer_name,phone number,Address and order item.**Ice_cream** is identified by item_id,item_name,price and falavour.**Ice_cream maker** is also identified by maker_id,maker_name,address and phone number.

E-R Diagram:



NORMALIZATION

- Service

(wait_id, first_name, last_name, phone, address, customer_id, first_name, last_name, order_item, time, date, order_no)

1NF: phone is multivalued attribute.

2NF:

wait_id, first_name, last_name, phone, address

customer_id,first_name,last_name,order_item,wait_id

tdwait_id,time,date,order_no,wait_id,customer_id

3 NF: No transitive dependency.

Tables:

1.wait_id, first_name,last_name,phone,address

2.customer_id,first_name,last_name,order_item,wait_id

3.tdwait_id,time,date,order_no,wait_id,customer_id

- Order

(customer_id,first_name,last_name,phone,address,order_item,
item_id,item_name,mango,chocolate,strawberry,price,time,dat
e,order_no)

1 NF:phone is multivalued attribute.

2 NF:

customer_id,first_name,last_name,phone,address,order_item

item_id,item_name,mango,chocolate,strawberry,price

Cit_id,customer_id,item_id

Time date_id,time,date,order_no,customer_id,item_id

3 NF:

customer_id,first_name,last_name,phone,address,order_item

item_id, mango, chocolate, strawberry, td_price_id

td_price_id, item_name, price

Cit_id, customer_id, item_id

Time date_id, time, date, order_no, customer_id, item_id

Tables:

1. customer_id, first_name, last_name, phone, address, order_id

2. item_id, mango, chocolate, strawberry, td_price_id

3. td_price_id, item_name, price

4. Cit_id, customer_id, item_id

5. Time date_id, time, date, order_no, customer_id, item_id

- Monitor

(wait_id, first_name, last_name, phone, address, man_id,
first_name, last_name)

1 NF: phone is multivalued attribute

2 NF:

wait_id, first_name, last_name, phone, address, man_id

man_id, first_name, last_name

3 NF: No transitive dependency.

Tables:

1. wait_id, first_name, last_name, phone, address, man_id

2. man_id, first_name, last_name

- Deliver

(wait_id, first_name, last_name, phone, address, maker_id, first_name, last_name)

1 NF: phone is multivalued attribute

2 NF:

wait_id, first_name, last_name, phone, address

maker_id, first_name, last_name

wama_id, waiter_id, maker_id

3 NF: No transitive dependency.

Tables:

1. wait_id, first_name, last_name, phone, address

2. maker_id, first_name, last_name

3. wama_id, waiter_id, maker_id

- Advice

(man_id, first_name, last_name, phone, address, maker_id, first_name, last_name)

1 NF: phone is multivalued attribute.

2 NF:

man_id,first_name,last_name,phone,address

maker_id,first_name,last_name,man_id

3 NF: No transitive dependency.

Tables:

1.man_id,first_name,last_name,phone,address

2.maker_id,first_name,last_name,man_id

- Supply
(man_id, first_name,last_name,
phone,address,sup_id,sup_name,time,date,supply_no)

1 NF:phone is multivalued attribute

2 NF:

man_id,first_name,last_name,phone,address

sup_id,sup_name

mis_id,man_id,sup_id

datetime_id,time,date,supply_no, man_id,sup_id

3 NF:No transitive dependency.

Tables:

1.man_id,first_name,last_name,phone,address

2.sup_id,sup_name

3.mis_id,man_id,sup_id

4.datetime_id,time,date,supply_no, man_id,sup_id

- Make

(item_id, item_name, mango, chocolate, strawberry, price, maker_id, first_name, last_name, phone, address, order_no)

1 NF: phone is multivalued attribute

2 NF:

item_id, item_name, mango, chocolate, strawberry, price, maker_id

maker_id, first_name, last_name, phone, address

order_id, order_no, maker_id, item_id

3 NF:

item_id, mango, chocolate, strawberry, maker_id, it_price_id

it_price_id, item_name, price

maker_id, first_name, last_name, phone, address

order_id, order_no, maker_id, item_id

Tables:

1. item_id, mango, chocolate, strawberry, maker_id, it_price_id

2. it_price_id, item_name, price

3. maker_id, first_name, last_name, phone, address

4. order_id, order_no, maker_id, item_id

TOTAL TABLES:

- 1.~~wait_id, first_name, last_name, phone, address~~
- 2.customer_id, first_name, last_name, order_item, wait_id
- 3.tdwait_id, time, date, order_no, wait_id, customer_id
- 4.~~customer_id, first_name, last_name, phone, address, order_item~~
- 5.~~item_id, mango, chocolate, strawberry, it_price_id~~
- 6.td_price_id, item_name, price
- 7.Cit_id, customer_id, item_id
- 8.Timedate_id, time, date, order_no, customer_id, item_id
- 9.wait_id, first_name, last_name, phone, address, man_id
- 10.~~man_id, first_name, last_name~~
- 11.~~wait_id, first_name, last_name, phone, address~~
- 12.~~maker_id, first_name, last_name~~
- 13.wama_id, waiter_id, maker_id
- 14.~~man_id, first_name, last_name, phone, address~~

- 15.maker_id,first_name,last_name,man_id
- 16.man_id,first_name,last_name,phone,address
- 17.sup_id,sup_name
- ~~18.mis_id,man_id,sup_id~~
- 19.datetime_id,time,date,supply_no, man_id,sup_id
- 20.item_id ,mango,chocolate,strawberry,maker_id,it_price_id
- ~~21.it_price_id, item_name, price~~
- ~~22.maker_id, first_name,last_name,phone,address~~
- 23.order_id,order_no,maker_id,item_id

FINAL TABLES:

- 1.customer_id,first_name,last_name,order_item,wait_id
- 2.tdwait_id,time,date,order_no,wait_id,customer_id
- 3.td_price_id,item_name , price
- 4.Cit_id,customer_id,item_id
- 5.Timedate_id,time,date,order_no,customer_id,item_id
- 6.wait_id,first_name,last_name,phone,address,man_id
- 7.wama_id,waiter_id,maker_id
- 8.maker_id,first_name,last_name,man_id
- 9.man_id,first_name,last_name,phone,address

10.sup_id,sup_name

11.datetime_id,time,date,supply_no, man_id,sup_id

12.item_id ,mango,chocolate,strawberry,maker_id,it_price_id

13.order_id,order_no,maker_id,item_id

TABLE CREATION AND DATA INSERTION:

1. Manager table:

select * from manager

Results Explain Describe Saved SQL History

MAN_ID	FIRST_NAME	LAST_NAME	ADDRESS	PHONE	SALARY
501	Efaj	Rahman	Basundhara,Dhaka	1317616888	30000
502	Isfaq	Anam	Kuril,Dhaka	174858661	31000
503	Suhani	Dola	Nikunjo,Dhaka	1799567490	32000
504	Jannat	Shifa	Uttara,Dhaka	1771339340	33000
505	Nahid	Pervz	Tongi,Dhaka	1868518633	34000

5 rows returned in 0.09 seconds

[CSV Export](#)

2. Ice cream maker table:

select * from ice_cream_maker

Results Explain Describe Saved SQL History

MAKER_ID	FIRST_NAME	LAST_NAME	MAN_ID	SALARY
701	Rahim	Hossin	501	18000
702	Tuli	De	502	17000
703	Akib	khan	503	16000
704	Nijum	Rahman	504	14000
705	Juel	Rahman	505	13000

5 rows returned in 0.00 seconds

[CSV Export](#)

3. Waiter table:

Select *from waiter

Results Explain Describe Saved SQL History

WAIT_ID	FIRST_NAME	LAST_NAME	ADDRESS	PHONE	MAN_ID	SALARY
801	komol	De	kuratoli road,dhaka	1742424611	501	10000
802	Jisun	Rahman	kuratoli road,dhaka	1742424612	504	9500
803	Tuli	Rahman	aiub road,dhaka	1742424613	503	9000
804	Borna	De	uttara road,dhaka	1742424614	502	10000
805	Maisa	Rahman	dhanmondi road,dhaka	1742424615	501	9000

5 rows returned in 0.00 seconds

[CSV Export](#)

4. Customer table:

Select * from customer

Results Explain Describe Saved SQL History

CUSTOMER_ID	FIRST_NAME	LAST_NAME	ORDER_ITEM	WAIT_ID
901	Aiden	Ali	Chocolate ice cream	801
902	Oliver	Sen	Chocolate ice cream	802
903	Liam	Nora	Chocolate ice cream	803
904	Connor	De	Chocolate ice cream	804
905	Declan	Ma	Chocolate ice cream	805

5 rows returned in 0.09 seconds

[CSV Export](#)

5. Item name price table:

Select *

from item_name_price

Results	Explain	Describe	Saved SQL	History
TD_PEICE_ID	ITEM_NAME	PRICE		
3001	Chocolate ice cream	2000		
3002	Vanila ice cream	2100		
3003	Mango ice cream	2100		
3004	Strawberry ice cream	2000		
3005	Pistachio ice cream	2500		
5 rows returned in 0.00 seconds				CSV Export

6. Item table:

select * from item

Results Explain Describe Saved SQL History

ITEM_ID	MANGO	CHOCOLATE	STRAWBERRY	PRICE	MAKER_ID	IT_PRICE_ID
4001	Yes	No	No	2000	701	3001
4002	Yes	No	No	2000	702	3002
4003	Yes	No	No	2000	703	3004
4004	Yes	No	No	2000	704	3005
4005	Yes	No	No	2000	705	3005

5 rows returned in 0.00 seconds

CSV Export

7. Supplier table:

select * from supplier

Results Explain Describe Saved SQL History

SUP_ID	SUP_NAME	ADDRESS	PHONE	BILL
5001	Rahim	Farmgate	1799567490	1900
5002	Kaim	kuril	1799567491	1800
5003	Mizan	Rupgong	1799567492	1700
5004	Jisan	Uttara7	1799567493	1600
5005	Ablu	Jigatola	1799567494	1900

5 rows returned in 0.00 seconds

[CSV Export](#)

8. Manager supplier table:

select * from manager_supplier

Results Explain Describe Saved SQL History

MANSUP_ID	MAN_ID	SUP_ID
6021	501	5001
6022	502	5002
6023	503	5003
6024	504	5004
6025	505	5005

5 rows returned in 0.00 seconds

[CSV Export](#)

9. Order number table:

select * from order_number

Results Explain Describe Saved SQL History

ORDER_ID	ORDER_NO	ITEM_ID	MAKER_ID
10001	2001	4001	701
10003	2002	4002	702
10004	2001	4001	705
10005	2005	4005	701
10006	2003	4004	702

10. Waiter maker link table:

from waiter_maker_link

Results	Explain	Describe	Saved SQL	History
WAMA_ID	WAIT_ID	MAKER_ID		
12001	801	702		
12002	802	702		
12003	801	705		
12004	804	703		
12005	801	702		
12006	802	702		
12007	801	705		
12008	804	703		
12009	801	705		

11. Customer Item link:

select* from customer_item_link

Results	Explain	Describe	Saved SQL	History
CUSTOMERITEM_ID	ITEM_ID	CUSTOMER_ID		
13001	4001	902		
13002	4002	903		
13003	4001	902		
13004	4005	905		

4 rows returned in 0.00 seconds [CSV Export](#)

12. Order time link:

select * from order_time

Results	Explain	Describe	Saved SQL	History
TIMEDATE_ID	ORDER_TIME	ORDER_NO	ITEM_ID	CUSTOMER_ID
14001	11-NOV-20	2001	4001	902
14002	11-NOV-20	2002	4002	902
14003	11-NOV-20	2003	4004	905
14004	11-NOV-20	2004	4001	902
14005	11-NOV-20	2005	4005	904

5 rows returned in 0.05 seconds [CSV Export](#)

13. Service time table:

Select * from service time

Results	Explain	Describe	Saved SQL	History
TIME_DATE_ID	DATE_OF_SERVE	ORDER_NO	WAIT_ID	CUSTOMER_ID
14001	01-JAN-20	2001	801	902
14002	02-FEB-20	2002	802	902
14003	03-MAR-20	2003	803	902
14004	04-APR-20	2004	804	902
14005	05-MAY-20	2005	805	902

5 rows returned in 0.00 seconds [CSV Export](#)

QUESTION:

SUBQUERY:

1. Display the item name and price of those item whose price is more than Vanilla Ice Cream.
2. Display item id and price of the item which is made by ice-cream maker Juel.
3. Display all the information of those waiters who works under manager Efaj.

JOIN QUERY:

1. Write a query in SQL to display the first name, last name, of all customer and first name, last name and salary of waiters who served those customers.
2. Write a query in SQL to display the first and last name and address for those waiter who works under the manager whose id is 501.
3. Write a query to display the first name of ice-cream maker and first name of manager whose address is Basundhara, Dhaka.

GROUP FUNCTION:

1. Write a query to display the average salary of managers.
2. Write a query to display the max salary of waiters.

SINGLE ROW FUNCTION:

1. Write a query to display the manager first name is upper case whose id is 501.

VIEW:

1. Create a view to display first name, last name and id for the waiters.

CONCLUSION:

The E-R Diagram have six entities .Every entity have some attributes. The Entities are relation with other entities. Then normalize the E-R Diagram we found total 21 tables. Then we got total 13 final tables. Then we all the tables are created in SQL and insert values for each table. Then finally we create some query. This are sub query, join query, group function, and single row function and finally we create view.

