AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Choose an item.

Assignment Cover Sheet

Assign./Case Title:	02-05-2019		
Assign./CaseNo:	Click here to enter text.	Date of Submission:	02-05-1029
Course Title:	Introduction To Database		
Course Code:	Click here to enter text.	Section:	O
Semester:	Spring 2018-19	Degree Program:	BSc [CSE]
Course Teacher:	Rezwan Ahmed		

Declaration and Statement of Authorship:

1. I/we hold a copy of this Assignment/Case-Study, which can be produced if the original is lost/damaged.
2. This Assignment/Case-Study is my/our original work and no part of it has been copied from any other student's work or from any other source except where due acknowledgement is made.
3. No part of this Assignment/Case-Study has been written for me/us by any other person except where such collaborationhas been authorized by the concerned teacher and is clearly acknowledged in the assignment.
4. I/we have not previously submitted or currently submitting this work for any other course/unit.
5. This work may be reproduced, communicated, compared and archived for the purpose of detecting plagiarism.
6. I/we give permission for a copy of my/our marked work to be retained by the Faculty for review and comparison, including review by external examiners.
7. I/we understand thatPlagiarism is the presentation of the work, idea or creation of another person as though it is your own. It is a formofcheatingandisaveryseriousacademicoffencethatmayleadtoexpulsionfromtheUniversity. Plagiarized material can be drawn from, and presented in, written, graphic and visual form, including electronic data, and oral presentations. Plagiarism occurs when the origin of them arterial used is not appropriately cited.
8. I/we also understand that enabling plagiarism is the act of assisting or allowing another person to plagiarize or to copy my/our work.

* *Student(s) must complete all details except the faculty use part.*
** Please submit all assignments to your course teacher or the office of the concerned teacher.

Group Name/No.:

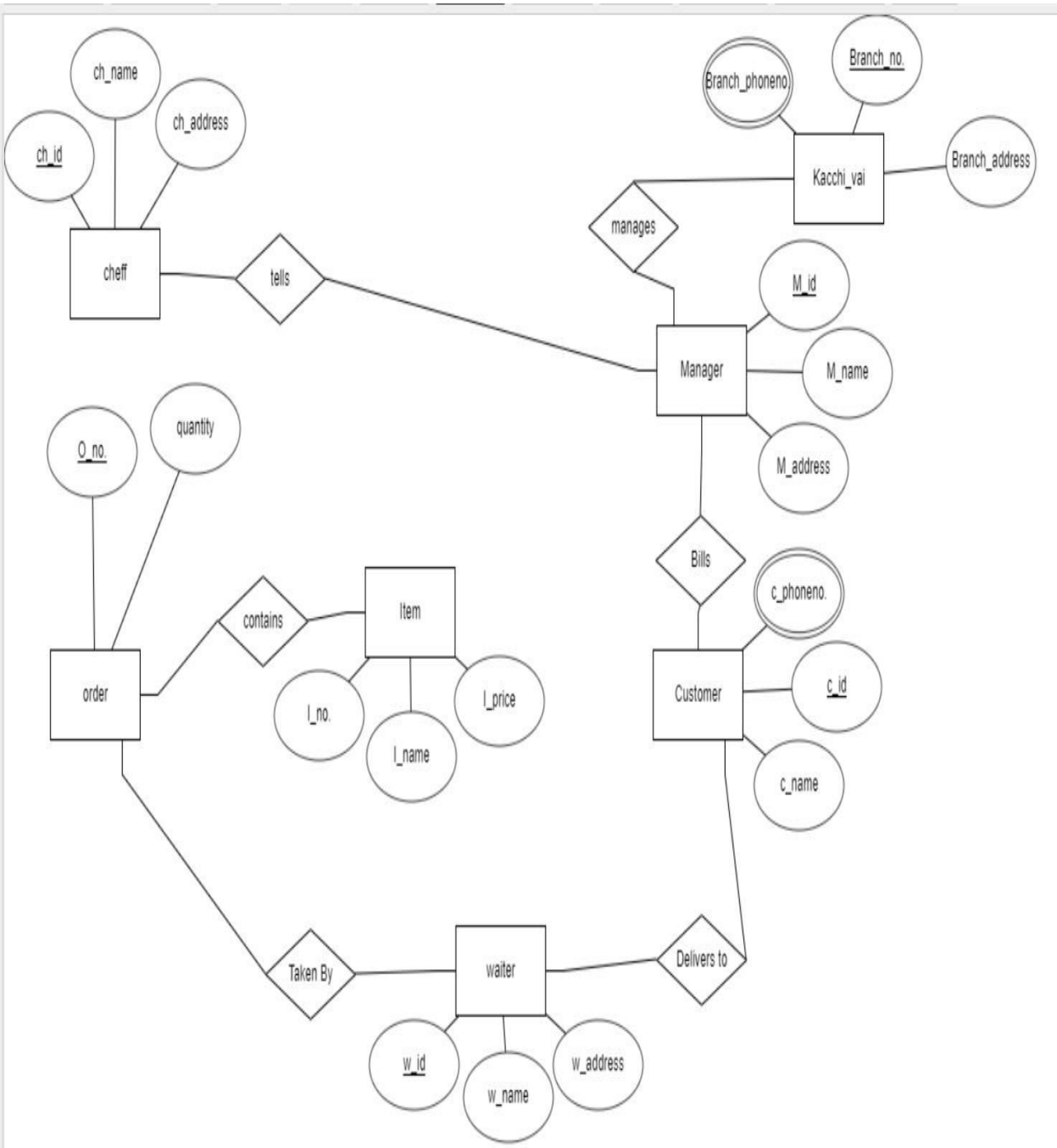
No	Name	ID	ROLL	Signature
1	Rafshan Bin Razzak	18-38310-2		
2	Afid Md Azwad			
3	Md Faisal Khan	18-38279-2		
4	Asiq Ahmed	18-38289-2		
5				
6				
7				
8				
9				
10				

Faculty use only		
FACULTYCOMMENTS	**Marks Obtained**	
	Total Marks	

Project Introduction

Kacchi Vai is a famous restaurant in Dhaka. This restaurant has its own managers and chefs in its different branches. Each of them has a unique id and name. Manager takes order and tells chef. A customer has to pay bill to the manager. Every customer has a unique id, name, address, phone no. Order has order no and it contains the number of items. Each item has item no, description and price chef prepare the order and waiter delivers the order to customer.

ER-DIAGRAM



NORMALIZATION

- MANAGES (M_ID, M_NAME, M_ADDRESS, Branch_PHONENO., Branch _ADDRESS, Branch _NUM)

1NF

PHONE_NO IS AN MULTIVALUED ATTRIBUTE

2NF

(M_ID, M_NAME, M_ADDRESS)
(Branch _NUM, Branch_ADDRESS,
M_ID)

3NF

(M_ID, M_NAME, M_ADDRESS)
(Branch _NUM, Branch _ADDRESS,M_ID)

Tables for MANAGES are given below:

(M_ID, M_NAME, M_ADDRESS)
(Branch _NUM, Branch_ADDRESS, M_ID)

TELLS (M_ID, M_NAME, M_ADDRESS, CH_ID, CH_NAME, CH_ADDRESS)

1NF

NO MULTIVALUED ATTRIBUTE

2NF

(M_ID, M_NAME, M_ADDRESS)
(CH_ID, CH_NAME, CH_ADDRESS,M_ID)

3NF

(M_ID, M_NAME, M_ADDRESS)
(CH_ID, CH_NAME, CH_ADDRESS,M_ID)

Tables for TELLS are given below:
(CH_ID, CH_NAME, M_ID)

- CONTAINS (I_NO, I_NAME, I_PRICE, O_NO, QUANTITY)

1NF

NO MULTIVALUED ATTRIBUTE

2NF

(I_NO, I_NAME, I_PRICE)
(O_NO, QUANTITY)
(I_O, I_NO, O_NO)

3NF

(O_NO, QUANTITY)
(I_NO, I_NAME, I_PRICE)
(INP, I_NAME, I_PRICE)
(I_O, INP, O_NO, I_NO)
Tables for contains are given below:
(O_NO, QUANTITY)
(I_NO, I_NAME, I_PRICE)
(INP, I_NAME, I_PRICE)
(I_O, INP, O_NO, I_NO)

- TAKENBY (O_NO, QUANTITY, W_ID, W_NAME) waiter

1NF

NO MULTIVALUED ATTRIBUTE

2NF

(O_NO, QUANTITY)
(W_ID, W_NAME)
(O_W, O_NO, W_ID)

3NF

(O_NO, QUANTITY)
(W_ID, W_NAME)
(O_W, O_NO, W_ID)

Tables for taken by are given below:
(W_ID, W_NAME, W_ADDRESS)
(O_W, O_NO, W_ID)

- DELIVERS TO (W_ID, W_NAME, W_ADDRESS, C_PHONENO, C_ID, C_NAME)

1NF

C_PHONENO IS A MULTTIVALUED ATTRIBUTE

2NF

(W_ID, W_NAME, W_ADDRESS)
(C_ID, C_NAME)

(C_W, W_ID, C_ID)

3NF

(W_ID, W_NAME, W_ADDRESS)
(C_ID, C_NAME,)
(C_W, W_ID, W_ADDRESS, C_ID)

Tables for delivers to are given below:
(C_ID, C_NAME)
(C_W, W_ID, W_ADDRESS, C_ID)

- BILL (M_ID, M_NAME, M_ADDRESS, C_PHONENO, C_ID)

1NF

C_PHONENO IS A MULTIVALUED ATTRIBUTE

2NF

(M_ID, M_NAME, M_ADDRESS)
(C_ID, C_NAME)
(M_C, M_ID, C_ID)

3NF

(M_ID, M_NAME, M_ADDRESS)
(C_ID, C_NAME)
(M_C, M_ID, C_ID)

Tables for bill are given below:
(M_C, M_ID, C_ID)

Table List:

1. Manager

2.Branches
3.Chef
4.Customer
5.Order
6.Item
7.Waiter

Table Creation

1.Branches

```
Create table branches (branch_no number (20) primary key,Branch_Contact_No number (15),branch_address varchar (82))
```

Values:

```
Insert into branches values( 1,0178938473, ‘Motijheel’)
Insert into branches values( 2,0178938433, ‘Badda’)
Insert into branches values( 3,0178434, ‘Kuril’)
Insert into branches values( 4,017893233, ‘Khilgaon’)
Insert into branches values( 5,0134373, ‘Mirpur’)
```

Screenshot:

BRANCH_NO	BRANCH_CONTACT_NO	BRANCH_ADDRESS
1	178938473	Motijheel
3	178434	Kuril
5	134373	Mirpur
2	178938433	Badda
4	17893233	Khilgaon

Download CSV

5 rows selected.

2.Manager

Create table manager (M_ID varchar (10) primary key,M_Name varchar (30), M_Address varchar (30), Branch_No number (20), foreign key (Branch_No) REFERENCES branches (Branch_No))

Values:

Insert into manager values (‘1A1’, ‘Karim’, ‘Motijheel’, 1)

Insert into manager values (‘1B2’, ‘Rarim’, ‘Badda’, 2)

Insert into manager values (‘1C3’, ‘fahim’, ‘Kuril’, 3)

Insert into manager values (‘1D4’, ‘Bikash’, ‘Khilgaon’, 4)

Insert into manager values (‘1E5’, ‘Prokash’, ‘Mirpur’, 5)

Screenshot:

M_ID	M_NAME	M_ADDRESS	BRANCH_NO
1C3	fahim	Kuril	3
1A1	Karim	Motijheel	1
1D4	Bikash	Khilgaon	4
1E5	Prokash	Mirpur	5

Download CSV

4 rows selected.

3. Chef

Create table chef (ch_id number (23) primary key,ch_name varchar (40), m_id varchar (10), foreign key (m_id) REFERENCES manager (M_ID))

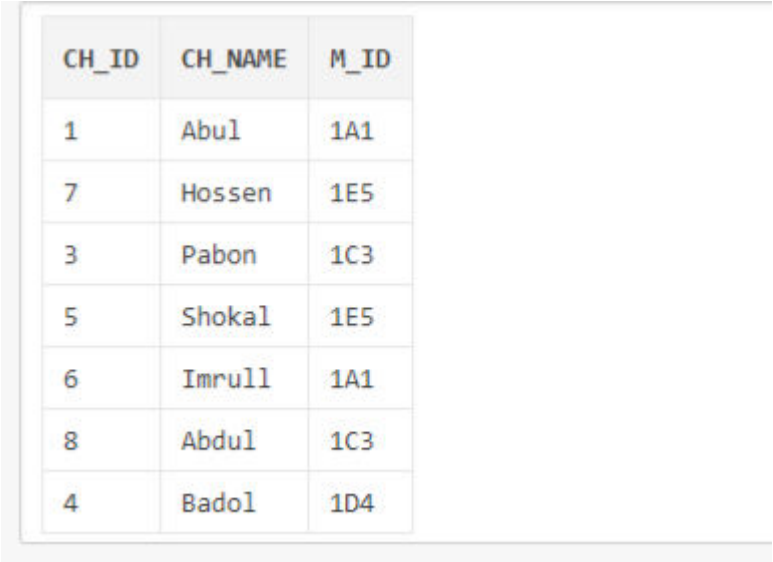
Values:

Insert into chef values (‘Chef1’, ‘Abul’, ‘1A1’)

Insert into chef values (‘Chef2’, ‘Novel’, ‘1B2’)

```
Insert into chef values (‘Chef3’, ‘Pabon’, ‘1C3’)
Insert into chef values (‘Chef4’, ‘Badol’, ‘1D4’)
Insert into chef values (‘Chef5’, ‘Shokal’, ‘1E5’)
Insert into chef values (‘Chef6’, ‘Imrull’, ‘1A1’)
Insert into chef values (‘Chef7’, ‘Hossen’, ‘1E5’)
Insert into chef values (‘Chef8’, ‘Abdul’, ‘1C3’)
```

Screenshot:



CH_ID	CH_NAME	M_ID
1	Abul	1A1
7	Hossen	1E5
3	Pabon	1C3
5	Shokal	1E5
6	Imrull	1A1
8	Abdul	1C3
4	Badol	1D4

4. order

Create table (order_no number (34) primary key,quantity number (23))

Values:

Insert into order values (1,5)

Insert into order values (2,3)

Insert into order values (3,8)

Insert into order values (4,10)

Insert into order values (5,5)

Screenshot:

ORDER_NO	QUANTITY
1	5
2	3
3	8
4	10
5	5

Download CSV

5 rows selected.

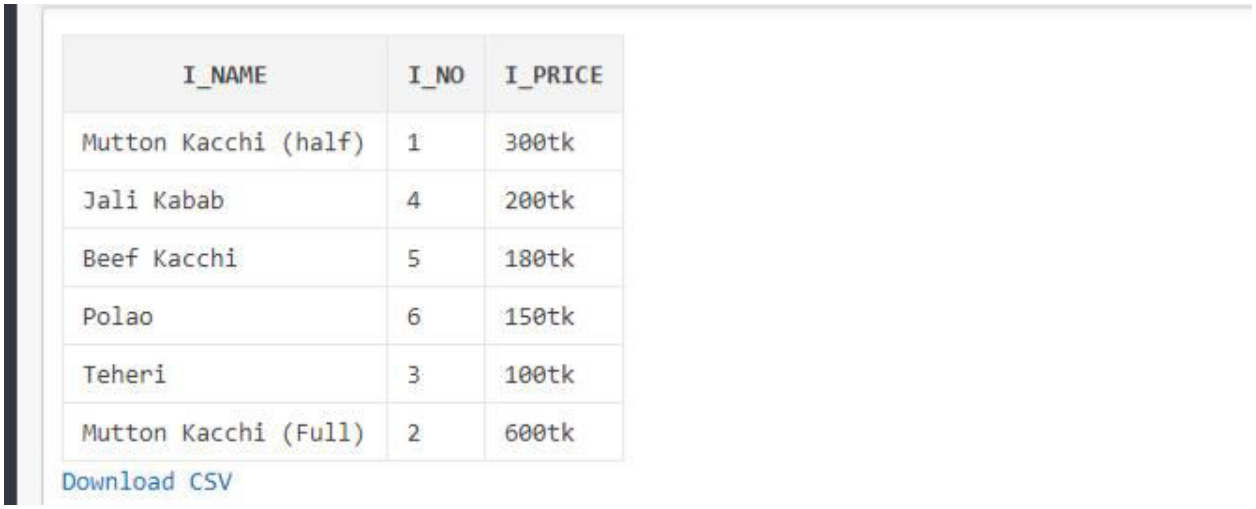
5. Item

```
Create table item (i_name varchar (30),i_no number
(40) primary key,i_price varchar (30))
```

Values:

```
Insert into item values('Mutton Kacchi (half)',1,
'300tk')

Insert into item values('Mutton Kacchi (Full)',2,
'600tk')

Insert into item values('Teheri',3, '100tk')

Insert into item values('Polao',4, '150tk')

Insert into item values('Jali Kabab',4, '200tk')

Insert into item values('Beef Kacchi',5, '180tk')
```

Screenshot:



I_NAME	I_NO	I_PRICE
Mutton Kacchi (half)	1	300tk
Jali Kabab	4	200tk
Beef Kacchi	5	180tk
Polao	6	150tk
Teheri	3	100tk
Mutton Kacchi (Full)	2	600tk

Download CSV

6. Waiter

```
Create table waiter (w_id varchar (38) primary
key,w_name varchar (89), branch_address varchar
(82),foreign key( branch_address) REFERENCES
branches( branch_address)
```

Values:

```
Insert into waiter values (‘W1’,’Hasnat’,
‘Motijheel’)

Insert into waiter values (‘W2’,’Shuvo’, ‘Badda’)

Insert into waiter values (‘W3’,’Labib’, ‘Mirpur’)

Insert into waiter values (‘W4’,’Kiron’, ‘Kuril’)

Insert into waiter values (‘W5’,’Noman’, ‘Khilgaon’)
```

Screenshot:

W_ID	W_NAME	BRANCH_NO
W2	Shuvo	2
W1	Hasnat	1
W4	Kiron	4
W5	Noman	5
W3	Labib	3

Download CSV

7. Customer

Create table customer (c_id varchar (39) primary key ,c_address varchar (34), c_phone_no number(16))

Values:

Insert into customer values (‘C1’, ‘Shreepur’, 0179387878)

Insert into customer values (‘C2’, ‘Uttara’, 0179287878)

Insert into customer values (‘C3’, ‘Khilkhet’, 0179334278)

Insert into customer values (‘C4’, ‘Basundhara’, 01793237878)

Insert into customer values (‘C5’, ‘Kuril’, 0179323178)

Screenshot:

C_ID	C_ADDRESS	C_PHONE_NO
C1	Shreepur	179387878
C2	Uttara	179287878
C3	Khilkhet	179334278
C5	Kuril	179323178
C4	Basundhara	1793237878

Download CSV

5 rows selected.

Example of some Queries:

1. Information of managers working in Khilgaon.

Query: `select * from manager where branch_no=(select branch_no from branches where branch_address='Khilgaon')`

M_ID	M_NAME	M_ADDRESS	BRANCH_NO
1D4	Bikash	Khilgaon	4

2. Information on maximum number of working chefs

Query: `select max(ch_name),Branch_No from manager,chef where manager.m_id=chef.m_id group by Branch_No`

MAX(CH_NAME)	BRANCH_NO
Imrull	1
Novel	2
Badol	4
Shokal	5
Pabon	3

3. Information on a specific order.

Query: `select * from order_info,item where order_no=5 and i_price='300tk'`

4. Minimum price of an item

`Query: select min(i_price) from item`

MIN(I_PRICE)
100tk

Download CSV

5. Items with a higher price than Jali Kabab

Query: select*from item where i_price>(select i_price from item where i_name='Jali Kabab')

I_NAME	I_NO	I_PRICE
Mutton Kacchi (half)	1	300tk
Mutton Kacchi (Full)	2	600tk

Download CSV

2 rows selected.

6. Maximum number of managers per branch

Query: select max (count(*)) from manager group by branch_no

MAX(COUNT(*))
1

Download CSV

7. Available branches where number of managers is greater than 2

Query: select max (count(*)) from manager group by branch_no having count(*)>2

```
no data found
```

Summarization:

Now a days, most of the Bengali restaurants are totally unorganized. Almost everyday, consumer right boards are fining them but they’re are not changing as we can see. So this database can be helpful for both the customers and the salesman. Most of the restaurants in some countries like UK,USA maintain their own service database. We faced numerous problems while completing this project. We faced problems related to database creation and normalization as well as query writing. Most of us were inexperienced in creating an ER diagram and normalizing it. But after all, we tried our best to complete a perfect database management system. Yes, there are still blank spaces and errors but we’ve achieved our primary goal, we believe.

Thoughts: A sleepless semester break.

Task division among the members:

1.Rafshan Bin Razzak (18-38310-2) , Md Faisal Khan (18-38279-2): Table Creation and Query Writing.

2. Afid Md Azwad and Ashiq Ahmed (18-38289-2) : ER Diagram Creation and Normalization.

**********Thank You**********