

LAB EXPERIMENT

DATABASE MANAGEMENT SYSTEM

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B.Tech CSE1(3rd semester)

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EXPERIMENT-1

Entity-Relationship Diagram

Takes

Received\_from

Sell\_to

Orders

Salesman

Customer

EXPERIMENT – 2

**Database Schema for a customer-sale scenario**

Customer(**Cust id : integer,** cust\_name: string)

Item(**item\_id: integer,** item\_name: string, price: integer)

Sale(**bill\_no: integer,** bill\_data: date, **cust\_id: integer, item\_id: integer**, qty\_sold: integer)

For the above schema, perform the following—

1. Create the tables with the appropriate integrity constraints.
2. Insert around 10 records in each of the tables.
3. List all the bills for the current date with the customer names and item numbers.
4. List the total Bill details with the quantity sold, price of the item and the final amount.
5. List the details of the customer who have bought a product which has a price>200.
6. Give a count of how many products have been bought by each customer
7. Give a list of products bought by a customer having cust\_id as 5.
8. List the item details which are sold as of today.
9. Create a view which lists out the bill\_no, bill\_date, cust\_id, item\_id, price, qty\_sold, amount. Create a view which lists the daily sales date wise for the last one week.

/\*1.Creating tables\*/

CREATE TABLE Customer(

cust\_id int,

cust\_name varchar(20)

PRIMARY KEY(cust\_id)

);

CREATE TABLE Item(

item\_id int,

item\_name varchar(20),

price int

PRIMARY KEY(item\_id)

);

CREATE TABLE Sale(

bill\_no int,

bill\_data date,

cust\_id int references Customer(cust\_id),

item\_id int references Item(item\_id),

qty\_sold int

PRIMARY KEY(bill\_no)

);

/\*2.Instering values to respective tables\*/

INSERT INTO Customer VALUES (1,'Aakash');

INSERT INTO Customer VALUES (2,'Nisha');

INSERT INTO Customer VALUES (3,'Vivek');

INSERT INTO Customer VALUES (4,'Shyam');

INSERT INTO Customer VALUES (5,'Anju');

INSERT INTO Customer VALUES (6,'Nitish');

INSERT INTO Customer VALUES (7,'Pragya');

INSERT INTO Customer VALUES (8,'Khyati');

INSERT INTO Customer VALUES (9,'Muskan');

INSERT INTO Customer VALUES (10,'Pooja');

INSERT INTO Item VALUES (1001,'lays chips',300);

INSERT INTO Item VALUES (1004,'Sugar',540);

INSERT INTO Item VALUES (1010,'Salt',290);

INSERT INTO Item VALUES (2223,'Biscuits',180);

INSERT INTO Item VALUES (1910,'Kurkure',340);

INSERT INTO Item VALUES (2450,'Corn Soup',210);

INSERT INTO Item VALUES (1003,'Soaps',500);

INSERT INTO Item VALUES (1008,'Detergent',170);

INSERT INTO Item VALUES (2133,'Vegetables',200);

INSERT INTO Item VALUES (2098,'Fruits',300);

INSERT INTO Sale VALUES (9001,'2001-08-10',8,1008,2);

INSERT INTO Sale VALUES (9110,'2011-10-19',3,1910,1);

INSERT INTO Sale VALUES (9670,'2020-09-19',1,1010,9);

INSERT INTO Sale VALUES (9232,'2020-09-19',9,2450,3);

INSERT INTO Sale VALUES (9871,'2020-08-10',5,1010,1);

INSERT INTO Sale VALUES (9021,'2020-09-20',7,1004,8);

INSERT INTO Sale VALUES (9222,'2020-09-19',6,1001,3);

INSERT INTO Sale VALUES (9910,'2001-09-20',4,2133,2);

INSERT INTO Sale VALUES (9233,'2020-09-20',10,1003,7);

INSERT INTO Sale VALUES (9564,'2020-09-19',2,2223,3);

UPDATE Sale SET cust\_id=5 WHERE item\_id=1010;

SELECT \* FROM Customer;

SELECT \* FROM Item;

SELECT \* FROM Sale;

/\*3.Bills for the current date\*/

SELECT c.cust\_name,i.item\_id,s.bill\_no

FROM Customer c,Item i,Sale s

WHERE c.cust\_id=s.cust\_id and i.item\_id=s.item\_id and s.bill\_data='2020-09-19';

/\*4.Total Bill details\*/

SELECT s.qty\_sold,i.price,(s.qty\_sold\*i.price)Total

FROM Sale s,Item i WHERE i.item\_id=s.item\_id;

/\*5.Customers who have bought a product which has price>200\*/

SELECT c.cust\_id,c.cust\_name

From Customer c,Item i,Sale s

WHERE i.price>200 and i.item\_id=s.item\_id and c.cust\_id=s.cust\_id;

/\*6.Total product bought by each customer\*/

SELECT s.cust\_id,count(s.item\_id)Total\_Product

FROM Sale s GROUP BY s.cust\_id;

/\*7.List of products bought by customer having cust\_id=5\*/

SELECT s.bill\_no,s.item\_id,s.qty\_sold

FROM Sale s WHERE s.cust\_id=5;

/\*8.List of items which are sold as of today\*/

SELECT i.item\_id,i.item\_name,i.price

FROM Item i,Sale s

WHERE s.bill\_data='2020-09-19' AND i.item\_id=s.item\_id;

/\*9.View table\*/

CREATE VIEW Sales1 AS

SELECT s.bill\_no,s.bill\_data,c.cust\_id,i.item\_id,

i.price,s.qty\_sold,(i.price\*s.qty\_sold)Amount

FROM Customer c,Item i,Sale s

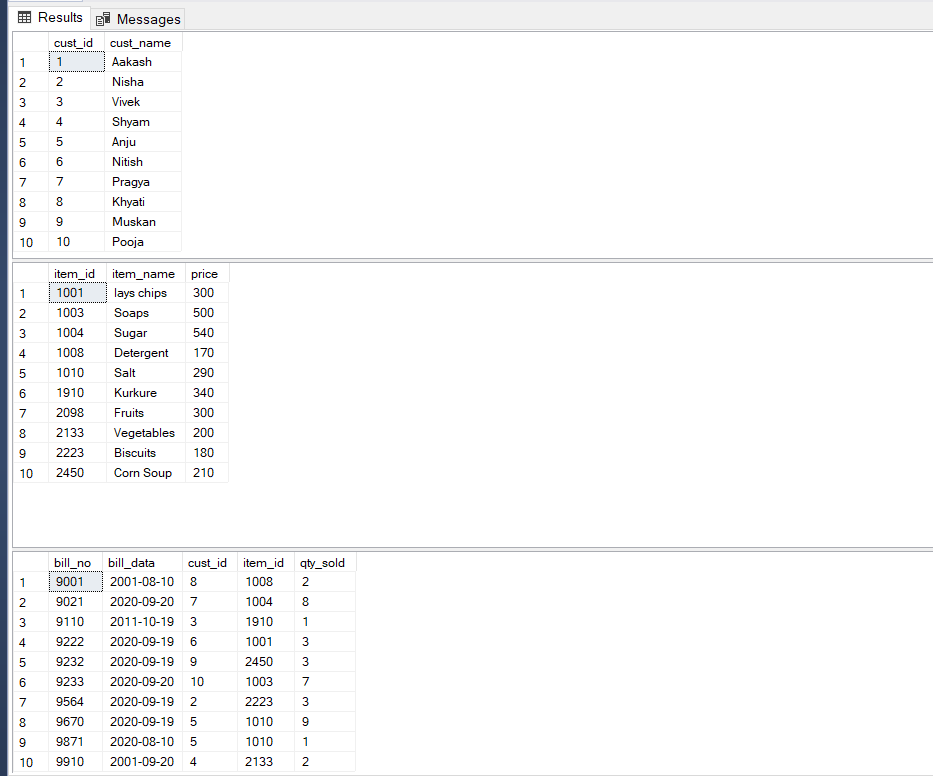
WHERE c.cust\_id=s.cust\_id and i.item\_id=s.item\_id;

SELECT \* FROM Sales1;

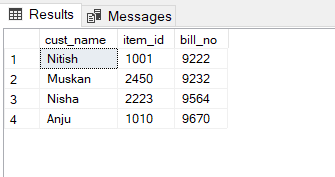
SELECT count(s.qty\_sold\*i.price)Quantity\_Sold,s.bill\_data FROM Sale s,Item i WHERE s.bill\_data>=DATEADD(day,-7,GETDATE()) GROUP BY s.bill\_data;

OUTPUT

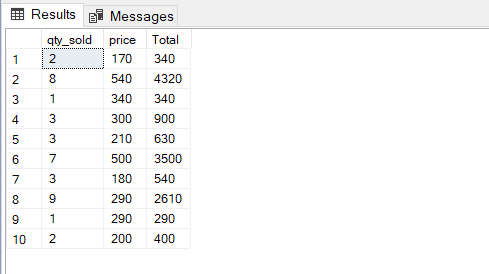
/\*2.Tables with respective values\*/



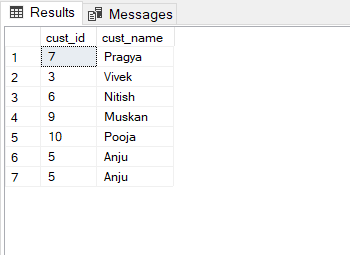
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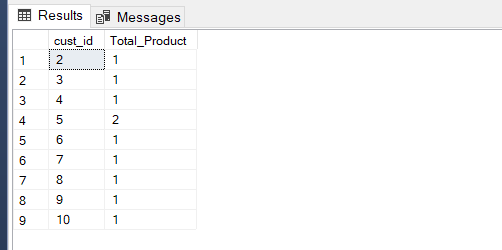
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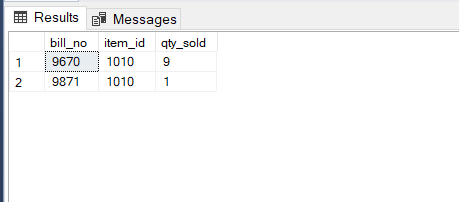
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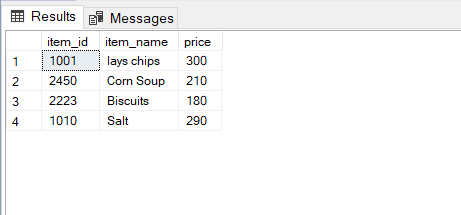
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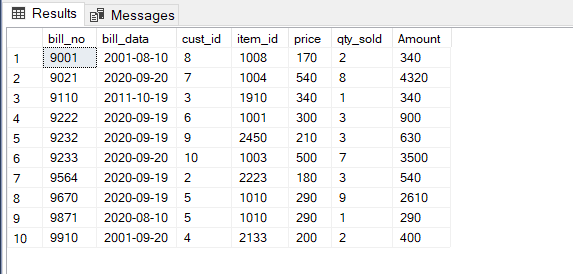
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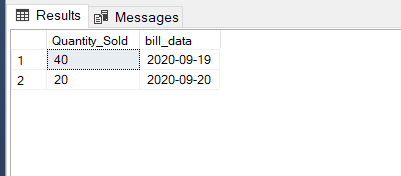


/\*8\*/



/\*9\*/





EXPERIMENT-3

**Database Schema for a Student Library scenario**

Student(**Stud\_no : integer,** Stud\_name: string)

Membership(**Mem\_no: integer**, **Stud\_no: integer**)

Book(**book\_no: integer**, book\_name:string, author: string)

Iss\_rec**(iss\_no:integer**, iss\_date: date, **Mem\_no: integer**, **book\_no: integer**)

For the above schema, perform the following—

1. Create the tables with the appropriate integrity constraints
2. Insert around 10 records in each of the tables
3. List all the student names with their membership numbers
4. List all the issues for the current date with student and Book names
5. List the details of students who borrowed book whose author is CJDATE
6. Give a count of how many books have been bought by each student
7. Give a list of books taken by student with stud\_no as 5
8. List the book details which are issued as of today
9. Create a view which lists out the iss\_no, iss \_date, stud\_name, book name
10. Create a view which lists the daily issues-date wise for the last one week

CREATE DATABASE LAB4;

USE LAB4;

/\*1.Creating tables\*/

CREATE TABLE Student

(

Stud\_no int,

Stud\_name varchar(20)

PRIMARY KEY(Stud\_no)

);

CREATE TABLE Membership

(

Mem\_no int,

Stud\_no int references Student(Stud\_no)

PRIMARY KEY(Mem\_no)

);

CREATE TABLE Book(

Book\_no int,

Book\_name varchar(20),

Author varchar(20)

PRIMARY KEY(Book\_no)

);

CREATE TABLE Iss\_rec(

Iss\_no int,

Iss\_date date,

Mem\_no int references Membership(Mem\_no),

Book\_no int references Book(Book\_no)

PRIMARY KEY(Iss\_no)

);

/\*2.Inserting values \*/

INSERT INTO Student VALUES (12,'Salman');

INSERT INTO Student VALUES (23,'Manisha');

INSERT INTO Student VALUES (34,'Nisha');

INSERT INTO Student VALUES (9,'Aakash');

INSERT INTO Student VALUES (10,'Kapil');

INSERT INTO Student VALUES (24,'Aaliya');

INSERT INTO Student VALUES (78,'Vivek');

INSERT INTO Student VALUES (17,'Simran');

INSERT INTO Student VALUES (45,'Nidhi');

INSERT INTO Student VALUES (56,'Rajat');

INSERT INTO Student VALUES (1,'Manish');

INSERT INTO Membership VALUES (1234,56);

INSERT INTO Membership VALUES (2321,78);

INSERT INTO Membership VALUES (8766,1);

INSERT INTO Membership VALUES (9321,10);

INSERT INTO Membership VALUES (4532,9);

INSERT INTO Membership VALUES (6754,45);

INSERT INTO Membership VALUES (1456,17);

INSERT INTO Membership VALUES (3421,34);

INSERT INTO Membership VALUES (6751,23);

INSERT INTO Membership VALUES (8956,12);

INSERT INTO Book VALUES (6571,'Young Girl','Anne Frank');

INSERT INTO Book VALUES (8534,'Seven Wonders','Steve');

INSERT INTO Book VALUES (9000,'Igniters','Vivek');

INSERT INTO Book VALUES (8999,'Descrete Maths','Aakash');

INSERT INTO Book VALUES (6555,'Biology','Rajan');

INSERT INTO Book VALUES (7655,'Chemistry','Anne Frank');

INSERT INTO Book VALUES (6011,'Panchtantra','Vivek');

INSERT INTO Book VALUES (7232,'Invisible Man','CJDATE');

INSERT INTO Book VALUES (9191,'Liefelong','Steve');

INSERT INTO Book VALUES (8001,'Reality','Anne Frank');

INSERT INTO Iss\_rec VALUES (2331,'2020-09-20',2321,6011);

INSERT INTO Iss\_rec VALUES (4545,'2020-09-17',8956,7232);

INSERT INTO Iss\_rec VALUES (1212,'2020-09-20',4532,6571);

INSERT INTO Iss\_rec VALUES (9088,'2020-08-11',6751,9000);

INSERT INTO Iss\_rec VALUES (8011,'2020-08-20',9321,6011);

INSERT INTO Iss\_rec VALUES (3222,'2020-09-19',8956,8999);

INSERT INTO Iss\_rec VALUES (1444,'2020-07-30',8766,7232);

INSERT INTO Iss\_rec VALUES (7688,'2020-09-20',2321,8534);

INSERT INTO Iss\_rec VALUES (9453,'2020-08-10',3421,7655);

INSERT INTO Iss\_rec VALUES (1010,'2020-09-15',8956,7232);

SELECT \* FROM Student;

Select \* from book;

select \* from iss\_rec;

select \* from Membership;

/\*3.Student names with their membership numbers\*/

SELECT s.stud\_name,m.mem\_no FROM Student s,Membership m WHERE s.stud\_no=m.stud\_no;

/\*4.Issues for the current date\*/

SELECT i.Iss\_no,i.Mem\_no,i.Book\_no,s.stud\_name,b.book\_name FROM Iss\_rec i,Student s,Book b,Membership m

WHERE i.iss\_date='2020-09-20' and m.mem\_no=i.mem\_no and b.book\_no=i.book\_no and m.stud\_no=s.stud\_no;

/\*5.Students who borrowed book by CJDATE\*/

SELECT m.Mem\_no,m.Stud\_no,s.Stud\_name

FROM Membership m,Iss\_rec i,Book b,Student s

WHERE b.Author='CJDATE' AND i.Book\_no=b.Book\_no AND m.Mem\_no=i.Mem\_no AND s.Stud\_no=m.Stud\_no;

/\*6.Count of books bought by each student\*/

SELECT m.Stud\_no,count(s.stud\_no)Count\_books

FROM Book b,Student s,Iss\_rec i,Membership m

WHERE i.Mem\_no=m.Mem\_no AND m.stud\_no=s.stud\_no AND b.book\_no=i.book\_no GROUP BY m.stud\_no;

/\*7.List of books taken by a student with stud\_no=78\*/

SELECT b.book\_no,b.book\_name,b.Author

FROM Book b,Student s,Iss\_rec i,Membership m

WHERE s.stud\_no=78 and s.Stud\_no=m.Stud\_no AND i.Mem\_no=m.Mem\_no and b.book\_no=i.book\_no;

/\*8.Book details which are isssued today\*/

SELECT \* FROM Book b,Iss\_rec i

WHERE i.Iss\_date='2020-09-20' AND b.Book\_no=i.Book\_no;

/\*9.View which lists out the iss\_no,iss\_date,stud\_name,book\_name\*/

CREATE VIEW list AS SELECT i.Iss\_no,i.Iss\_date,s.Stud\_name,b.book\_name FROM Iss\_rec i,Student s,Book b, Membership m WHERE s.stud\_no=m.Stud\_no and m.Mem\_no=i.Mem\_no and b.book\_no=i.book\_no;

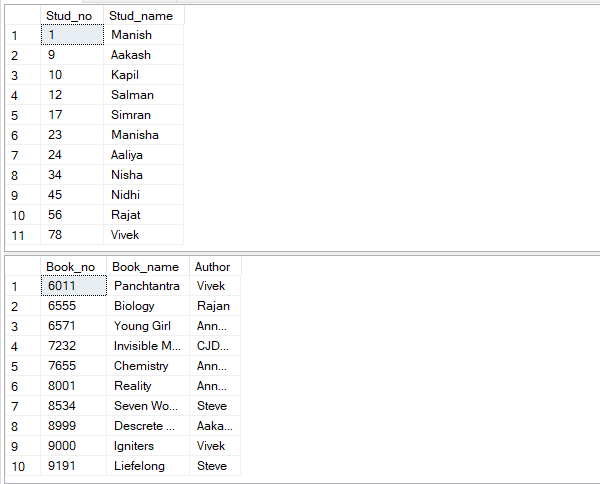
SELECT \* FROM list;

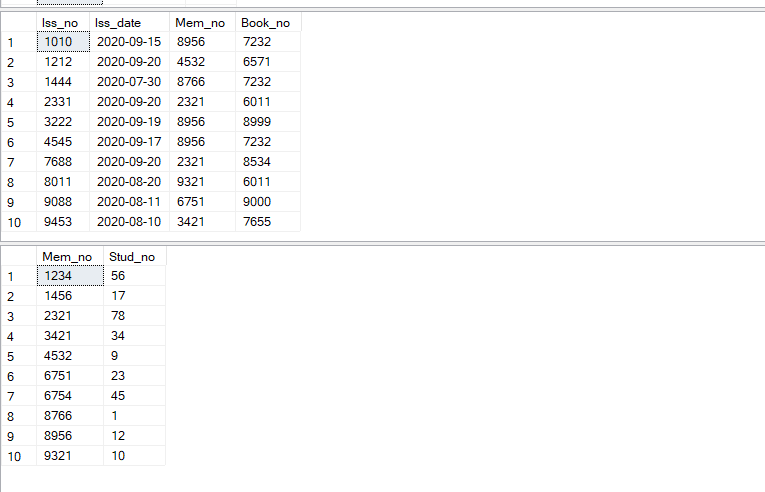
/\*10.Issues date wise for the last one week\*/

SELECT COUNT(i.iss\_date)count\_book,i.Iss\_date FROM Iss\_rec i WHERE i.Iss\_date>=DATEADD(day,-7,GETDATE()) GROUP BY i.Iss\_date;

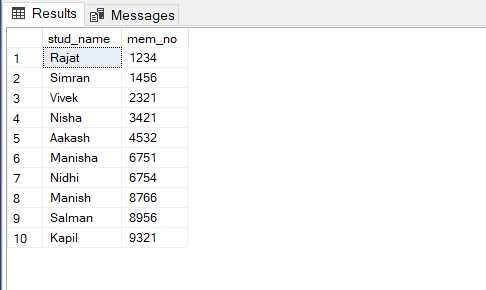
**OUTPUT**

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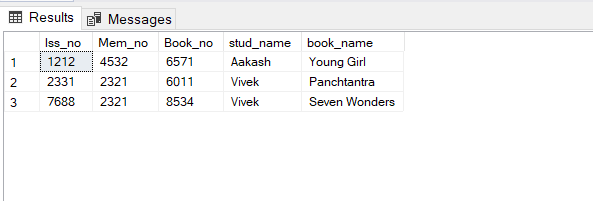




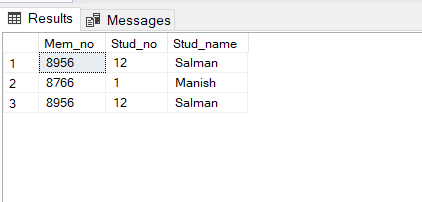
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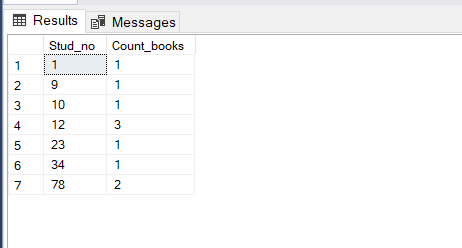
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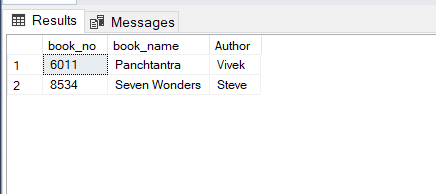
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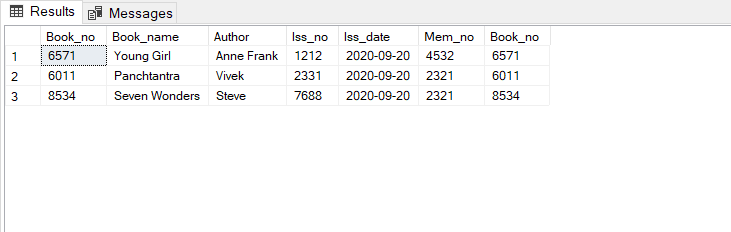
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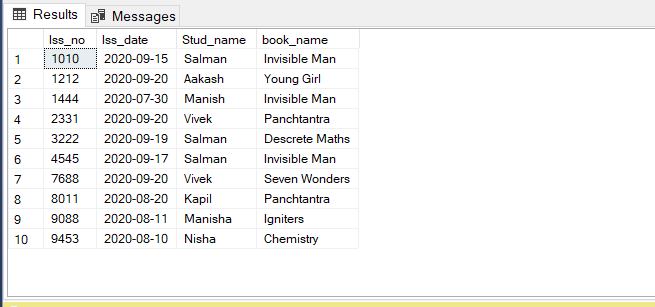
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/\*8\*/



/\*9\*/



/\*10\*/

