G. H. RAISONI COLLEGE OF ENGINEERING, NAGPUR

(An Autonomous Institute affiliated to Rashtrasant Tukdoji Maharaj, Nagpur University, Nagpur)

Department of Computer Science & Engineering

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Mini Project Report

Name of Project: Hotel management system

ABSTRACT –

Now adays maintaining an Hotel is not an easy task . It involves much tasks which are complex to remember by keeping textual records. Also this records can't be accessed after a longer period of time. Hence Computing it automatically using an effiecient machine is a must these days. Hence our model focuses on all the major tasks involved in managing a hotel. From Room booking system to various modules including Employee personnel module, Store module , Maintenance module and Purchase module. This makes all the data management very easy and accessible at any point of time.

INTRODUCTION –

The software product Hotel management system (HMS) is developed to automate major operations of the hotel. This database system will help in managing the data of different departments of the hotel, thus it will simplify the day to day tasks of the end users and they will be able to handle customer services with efficiency.

The HMS consist of total five modules , each module is briefly described below:

1. ## Room booking module:

This module contains data of rooms, customers and details of payment made by customers. The Sub modules are as follows:
- Room information
- Room tariff
- Customer information
- Customer payment record

Room data consist of room number, type, tariff and room status (whether room is empty, occupied or under maintenance). Customer data consist of customer id, name, address, check – in date and time, check – out date and time, duration of stay, valid

ID, mobile number, booked room type and room number. Customer payment record consist of receipt number, customer id, payment date, payment mode and amount paid by the customer.

2. Employee personnel module:

This module contains data of employees of the hotel and leaves taken by employees. The sub modules are as follows:

- Employee information
- Employee leaves

Employee data consist of employee id, name, date of birth, date of joining, basic salary and bank details. Leaves record consist of employee id, leave type, duration of leave, joining date and date of last leave taken.

3. Store module:

This module contains data of stock items and capital inventory. The sub modules are as follows:

- Stock item details
- Capital inventory

Stock items data consists of item details like item code, name, rate, quantity, last date of purchase and minimum stock quantity of item. Capital inventory data consists of inventory code, inventory name, brand, and maintenance duration and installation date.

1. Maintenance module:

This module contains a record of maintenance of inventory items. Maintenance data consist of inventory code of item, break down date, restoration date and repair charges.

1. Purchase module:

This module contains data of stock items purchased by the hotel. Purchase data consist order number, item code, order date, order

quantity, order amount and delivery date.

LITERATURE REVIEW –

- Understand the problem before you begin to create the analysis model.
- Develop prototypes that enable a user to understand how human machine interaction will occur.
- Record the origin of and the reason for every requirement.
- Use multiple views of requirements like building data, function and behavioural
- models.
- Work to eliminate ambiguity.

METHODOLOGY-

The software product Hotel management system (HMS) is developed using databases. This database system will help in managing the data of different departments of the hotel. Different modules are designed in a very simple manner , so that end user can handle this database very easily.

IMPLEMENTATION-

SQL Script:

Module 1: Room booking system

a) Room information table

```
create table room_info(
            room_no      int NOT NULL,
            room_type    char(20),
            room_status  char(2) CHECK (room_status in('E','O','UM')),
            PRIMARY KEY(room_no)
            );
insert into room_info values(101,'NASB','E');
insert into room_info values(102,'NASB','E');
insert into room_info values(103,'NASB','E');
insert into room_info values(104,'NASB','E');
insert into room_info values(105,'NASB','E');
insert into room_info values(106,'NASB','E');
insert into room_info values(201,'NADB','E');
insert into room_info values(202,'NADB','E');
insert into room_info values(203,'NADB','E');
insert into room_info values(204,'NADB','E');
insert into room_info values(205,'NADB','E');
insert into room_info values(206,'NADB','E');
insert into room_info values(301,'ACSB','E');
insert into room_info values(302,'ACSB','E');
insert into room_info values(303,'ACSB','E');
insert into room_info values(304,'ACSB','E');
insert into room_info values(305,'ACSB','E');
insert into room_info values(306,'ACSB','E');
insert into room_info values(401,'ACDB','E');
insert into room_info values(402,'ACDB','E');
insert into room_info values(403,'ACDB','E');
insert into room_info values(404,'ACDB','E');
```

insert into room_info values(405,'ACDB','E');
insert into room_info values(406,'ACDB','E');
insert into room_info values(501,'JS','E');
insert into room_info values(502,'JS','E');
insert into room_info values(503,'JS','E');
insert into room_info values(504,'MS','E');
insert into room_info values(505,'MS','E');
insert into room_info values(506,'MS','E');

update room_info set room_status = 'O' where room_no
in(101,102,106,203,205,301,405,502);
update room_info set room_status = 'O' where room_no = 201;
select * from room_info;

Output pane

Data Output	Explain	Messages	History

	room_no integer	room_type character(20)	room_status character(2)
1	103	NASB	E
2	104	NASB	E
3	105	NASB	E
4	202	NADB	E
5	204	NADB	E
6	206	NADB	E
7	302	ACSB	E
8	303	ACSB	E
9	304	ACSB	E
10	305	ACSB	E
11	306	ACSB	E
12	401	ACDB	E
13	402	ACDB	E
14	403	ACDB	E
15	404	ACDB	E
16	406	ACDB	E
17	501	JS	E
18	503	JS	E
19	504	MS	E
20	505	MS	E
21	506	MS	E
22	101	NASB	O
23	102	NASB	O
24	106	NASB	O
25	203	NADB	O
26	205	NADB	O
27	301	ACSB	O
28	405	ACDB	O
29	502	JS	O
30	201	NADB	O

b) Room tariff table

create table room_t
(room_type   char(4) primary key,
    room_des   char(20),
    room_tariff   numeric(4,0)CHECK(room_tariff BETWEEN 3000 AND 9000)
);
insert into room_t values('ACDB','AC Double bed',4500);
insert into room_t values('NADB','NON AC Double bed',3500);
insert into room_t values('ACSB','AC Single bed',4000);
insert into room_t values('NASB','NON AC Single bed',3000);
insert into room_t values('MS','Master suite',8000);
insert into room_t values('JS','Junior suite',6000);
select * from room_t

Output pane

Data Output Explain   Messages   History

	room_type character(4)	room_des character(20)	room_tariff numeric(4,0)
1	NASB	NON AC Single bed	3000
2	ACSB	AC Single bed	3500
3	NADB	NON AC Double bed	4000
4	ACDB	AC Double bed	4500
5	MS	Master suite	8000
6	JS	Junior suite	6000

select ri.room_no, ri.room_type, rt.room_des, rt.room_tariff from room_info ri, room_t   rt
where ri.room_type = rt.room_type;

Output pane

Data Output Explain   Messages   History

	room_no integer	room_type character(20)	room_des character(20)	room_tariff numeric(4,0)
1	103	NASB	NON AC Single bed	3000
2	104	NASB	NON AC Single bed	3000
3	105	NASB	NON AC Single bed	3000
4	202	NADB	NON AC Double bed	4000
5	204	NADB	NON AC Double bed	4000
6	206	NADB	NON AC Double bed	4000
7	302	ACSB	AC Single bed	3500
8	303	ACSB	AC Single bed	3500
9	304	ACSB	AC Single bed	3500
10	305	ACSB	AC Single bed	3500
11	306	ACSB	AC Single bed	3500
12	401	ACDB	AC Double bed	4500
13	402	ACDB	AC Double bed	4500
14	403	ACDB	AC Double bed	4500
15	404	ACDB	AC Double bed	4500
16	406	ACDB	AC Double bed	4500
17	501	JS	Junior suite	6000
18	503	JS	Junior suite	6000
19	504	MS	Master suite	8000
20	505	MS	Master suite	8000
21	506	MS	Master suite	8000
22	101	NASB	NON AC Single bed	3000
23	102	NASB	NON AC Single bed	3000
24	106	NASB	NON AC Single bed	3000
25	203	NADB	NON AC Double bed	4000
26	205	NADB	NON AC Double bed	4000
27	301	ACSB	AC Single bed	3500
28	405	ACDB	AC Double bed	4500
29	502	JS	Junior suite	6000
30	201	NADB	NON AC Double bed	4000

a) Customer information table

```sql
create table customer_info(
                cust_id     int NOT NULL,
                cust_name char(40) NOT NULL,
                mobile_no int  NOT NULL,
                address_1    varchar(30),
                address_2    varchar(30),
                address_3 varchar(30),
                check_in_dt date NOT NULL,
                check_in_tm time NOT NULL,
                check_out_dt date NOT NULL,
                check_out_tm time NOT NULL ,
                No_of_days    int,
                ID          varchar(10),
                PRIMARY KEY(cust_id)
            );

alter table customer_info alter column check_out_dt set default NULL;
alter table customer_info alter column check_out_tm set default NULL;
alter table customer_info drop column mobile_no;
alter table customer_info add column mobile_no bigint;
alter table customer_info add column room_ty char(4);
alter table customer_info add column room_number int;
update customer_info set room_number = 401 where cust_id = 10126;

update customer_info  set room_number  = 403 where cust_id = 10117;
insert into  customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,che
ck_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10112,'Vaib
havi Apte','34562310','Prakash Enclave Prakash nagar ','Nagpur Maharastra','India
','NASB','2020-3-20', '11:10:10','2020-3-24','11:10:10',  2 ,'Aadhar',103);
insert into  customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,che
ck_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10113,'Vaib
hav Shukla','1047834777','Om Enclave Ulas nagar ','Kanpur UP','India ','NASB', '2020-
3-25','10:10:10','2020-3-30','12:10:10',  5 ,'Aadhar',101);
insert into  customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,che
ck_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10114,'Kris
hna Pandy','2035673490','Prakash Enclave Prakash nagar ','Nagpur Maharastra','India
','ACSB', '2020-4-1', '9:15:10','2020-4-3','11:10:10',  3 ,'Passport',302);
insert into  customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,che
ck_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10115,'Sanj
ay Singh','2035672491','plt no 201 Mani nagar ','Varodara Gujrat','India ','NADB', '2020-
4-2', '9:15:10','2020-4-4','9:10:10',  2 ,'Ration card',202);
insert into  customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,che
```

ck_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10116,'Sanjana Pandy','3033673590','plt no 4 Laxmi nagar ','Goa Maharastra','India ','NADB', '2020-4-5', '7:15:10','2020-4-7','11:10:10', 2 ,'Passport',203);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10117,'Kishore Kumar','8835673490','Mannat Gandhi nagar ','Rajkot Gujarat','India ','ACDB', '2020-4-9', '6:20:10','2020-4-13','11:10:10', 5 ,'Aadhar card',401);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10118,'Ashok Malviya','8895673490','Manish colony Ganesh nagar ','Bhopal Madhya Pradesh','India ','ACDB', '2020-4-9', '6:25:10','2020-4-13','11:10:10', 5 ,'Aadhar card',402);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10119,'Kishore Agarwal','9955673490','defence colony kokila nagar ','Goa Goa','India ','JS','2020-4-9', '6:30:10','2020-4-13','11:10:10', 5 ,'Aadhar card',501);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10120,'Manik Kumar','8535673490','Pratap Enclave Pratap nagar ','Hyderabad Telangana','India ','ACDB','2020-4-9', '6:20:10','2020-4-13','11:10:10', 5 ,'Aadhar card',405);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10121,'Pratap Bansal','8835573490','Manaya roofs Alok nagar ','Nagpur Maharastra','India ','ACSB','2020-4-8', '6:20:10','2020-4-11','11:10:10', 4 ,'Aadhar card',303);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10122,'Anuj Lulu','99562310','Prakash Enclave Prakash nagar ','Nagpur Maharastra','India ','ACSB', '2020-3-20', '11:10:10','2020-3-24','11:10:10', 2 ,'Aadhar',301);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10123,'Sidhardh Shukla','9947834777','Om Enclave Ulas nagar ','Kanpur UP','India ','NADB', '2020-3-25', '10:10:10','2020-3-30','12:10:10', 5 ,'Aadhar',205);

insert into customer_info (cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10124,'Vija y Kumar Pandey','6735673490','Prakash Enclave Prakash nagar ','Nagpur Maharastra','India ','JS','2020-4-1', '9:15:10','2020-4-3','11:10:10', 3 ,'Passport',502);

```sql
insert into customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10125,'Kartar Singh','9835672491','plt no 201 Mani nagar ','Varodara Gujrat','India ','NASB', '2020-4-2', '9:15:10','2020-4-4','9:10:10',  2 ,'Ration card',102);
insert into customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10126,'Pulakit Samrat','7733673590','plt no 4 Laxmi nagar ','Goa Maharastra','India ','ACDB', '2020-4-5', '7:15:10','2020-4-7','11:10:10',  2 ,'Passport',104);
insert into customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10127,'Deepen Chaturvedi','9935673490','Mannat Gandhi nagar ','Rajkot Gujarat','India ','NASB', '2020-4-9', '6:20:10','2020-4-13','11:10:10',  5 ,'Aadhar card',105);
insert into customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10128,'Mallika Malviya','5895673490','Manish colony Ganesh nagar ','Bhopal Madhya Pradesh','India ','NADB', '2020-4-9', '6:25:10','2020-4-13','11:10:10',  5 ,'Aadhar card',201);
insert into customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10129,'Pushpa Agarwal','9755673490','defence colony kokila nagar ','Goa Goa','India ','NASB', '2020-4-9', '6:30:10','2020-4-13','11:10:10',  5 ,'Aadhar card',106);
insert into customer_info

(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10130,'Manisha Kumari','8935673490','Pratap Enclave Pratap nagar ','Hyderabad Telangana','India ','NADB','2020-4-9', '6:20:10','2020-4-13','11:10:10',  5 ,'Aadhar card',204);
insert into customer_info
(cust_id,cust_name,mobile_no,address_1,address_2,address_3,room_ty,check_in_dt,check_in_tm,check_out_dt,check_out_tm,no_of_days,ID,room_number)values(10111,'Kanika kapoor','9835573490','Manaya roofs Alok nagar ','Nagpur Maharastra','India ','MS','2020-4-8', '6:20:10','2020-4-11','11:10:10',  4 ,'Aadhar card',505);

select * from customer_info;
```
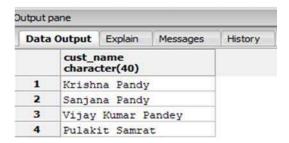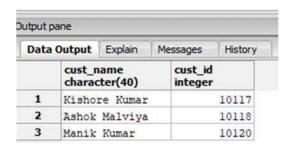
	cust_id integer	cust_name character(40)	address_1 character varying(30)	address_2 character varying(30)	address_3 character varying(30)	check_in_dt date	check_in_tm time without time zone	check_out_dt date	check_out_tm time without t	no_of_days integer	id character(15)	mobile_no bigint	room_ty character(4)	room_number integer
1	10114	Krishna Pand	Prakash Enclave Pr	Nagpur Maharastra	India	2020-04-01	09:15:10	2020-04-03	11:10:10	3	Passport	035673490	ACSB	302
2	10115	Sanjay Singh	plt no 201 Mani na	Varodara Gujrat	India	2020-04-02	09:15:10	2020-04-04	09:10:10	2	Ration card	035672491	NADB	202
3	10116	Sanjana Pand	plt no 4 Laxmi nag	Goa Maharastra	India	2020-04-05	07:15:10	2020-04-07	11:10:10	2	Passport	033673590	NADB	203
4	10118	Ashok Malvi	Manish colony Gane	Bhopal Madhya Prad	India	2020-04-09	06:25:10	2020-04-13	11:10:10	5	Aadhar card	395673490	ACDB	402
5	10119	Kishore Agar	defence colony kok	Goa Goa	India	2020-04-09	06:30:10	2020-04-13	11:10:10	5	Aadhar card	955673490	JS	501
6	10120	Manik Kumar	Pratap Enclave Pra	Hyderabad Telangan	India	2020-04-09	06:20:10	2020-04-13	11:10:10	5	Aadhar card	535673490	ACDB	405
7	10121	Pratap Bansa	Manaya roofs Alok	Nagpur Maharastra	India	2020-04-08	06:20:10	2020-04-11	11:10:10	4	Aadhar card	335573490	ACSB	303
8	10122	Anuj Lulu	Prakash Enclave Pr	Nagpur Maharastra	India	2020-03-20	11:10:10	2020-03-24	11:10:10	2	Aadhar	99562310	ACSB	301
9	10123	Sidhardh Sh	Om Enclave Ulas na	Kanpur UP	India	2020-03-25	10:10:10	2020-03-30	12:10:10	5	Aadhar	947834777	NADB	205
10	10124	Vijay Kumar	Prakash Enclave Pr	Nagpur Maharastra	India	2020-04-01	09:15:10	2020-04-03	11:10:10	3	Passport	735673490	JS	502
11	10125	Kartar Singh	plt no 201 Mani na	Varodara Gujrat	India	2020-04-02	09:15:10	2020-04-04	09:10:10	2	Ration card	335672491	NASB	102
12	10127	Deepen Chat	Mannat Gandhi naga	Rajkot Gujarat	India	2020-04-09	06:20:10	2020-04-13	11:10:10	5	Aadhar card	935673490	NASB	105
13	10128	Mallika Mal	Manish colony Gane	Bhopal Madhya Prad	India	2020-04-09	06:25:10	2020-04-13	11:10:10	5	Aadhar card	395673490	NADB	201
14	10129	Pushpa Agar	defence colony kok	Goa Goa	India	2020-04-09	06:30:10	2020-04-13	11:10:10	5	Aadhar card	755673490	NASB	106
15	10130	Manisha Kum	Pratap Enclave Pra	Hyderabad Telangan	India	2020-04-09	06:20:10	2020-04-13	11:10:10	5	Aadhar card	935673490	NADB	204
16	10111	Kanika kapo	Manaya roofs Alok	Nagpur Maharastra	India	2020-04-08	06:20:10	2020-04-11	11:10:10	4	Aadhar card	335573490	MS	505
17	10126	Pulakit Sam	plt no 4 Laxmi nag	Goa Maharastra	India	2020-04-05	07:15:10	2020-04-07	11:10:10	2	Passport	733673590	ACDB	401
18	10117	Kishore Kum	Mannat Gandhi naga	Rajkot Gujarat	India	2020-04-09	06:20:10	2020-04-13	11:10:10	5	Aadhar card	335673490	ACDB	403
19	10113	Vaibhav Shu	Om Enclave Ulas na	Kanpur UP	India	2020-03-25	10:10:10	2020-03-30	12:10:10	5	Aadhar	321240011	NASB	101
20	10112	Vaibhavi Apt	Prakash Enclave Pr	Nagpur Maharastra	India	2020-03-20	11:10:10	2020-03-24	11:10:10	2	Aadhar	560324118	NASB	103

select cust_name from customer_info where ID = 'Passport';

	cust_name character(40)
1	Krishna Pandy
2	Sanjana Pandy
3	Vijay Kumar Pandey
4	Pulakit Samrat

select cust_name,cust_id from customer_info where room_ty = 'ACDB' and ID = 'Aadhar card';

	cust_name character(40)	cust_id integer
1	Kishore Kumar	10117
2	Ashok Malviya	10118
3	Manik Kumar	10120

b) Customer payment record table

```
create table cust_pay_rec(
        receipt_no    varchar(8) NOT NULL,
        cust_id       int NOT NULL,
        amount        int NOT NULL,
        pay_mode      char(6) CHECK(pay_mode IN('Credit','Debit','Cheque','Cash')),
        pay_date      date NOT NULL,
        PRIMARY KEY(Receipt_no),
        FOREIGN KEY(cust_id) references customer_info(cust_id)
        );
```
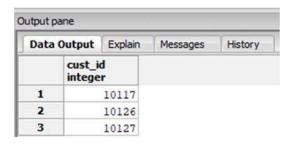
alter table cust_pay_rec drop column amount;
alter table cust_pay_rec add column amount numeric(4,0);
alter table cust_pay_rec alter column amount type numeric(6,0);

insert into cust_pay_rec values(1101201,'10112','Debit','2020-03-24',6000);
insert into cust_pay_rec values(1101202,'10114','Cash','2020-04-03',12000);
insert into cust_pay_rec values(1101203,'10115','Debit','2020-04-04',7000);
insert into cust_pay_rec values(1101204,'10117','Credit','2020-04-14',22500);
insert into cust_pay_rec values(1101205,'10118','Debit','2020-04-13',22500);
insert into cust_pay_rec values(1101206,'10121','Debit','2020-04-11',16000);
insert into cust_pay_rec values(1101207,'10119','Cash','2020-04-14',30000);
insert into cust_pay_rec values(1101208,'10126','Credit','2020-04-07',9000);
insert into cust_pay_rec values(1101209,'10130','Debit','2020-04-13',17500);
insert into cust_pay_rec values(1101301,'10127','Debit','2020-04-13',15000);
insert into cust_pay_rec values(1101302,'10111','Credit','2020-04-11',32000);
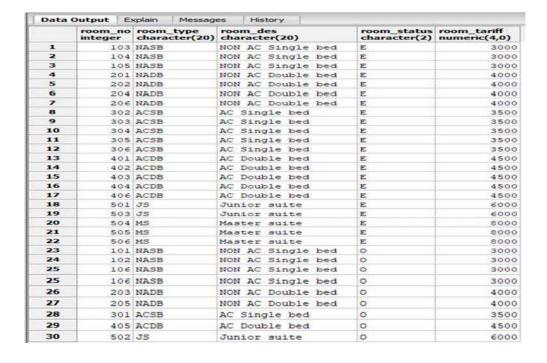select * from cust_pay_rec;

Output pane

	receipt_no character varying(8)	cust_id integer	pay_mode character(6)	pay_date date	amount numeric(6,0)
1	1101201	10112	Debit	2020-03-24	6000
2	1101202	10114	Cash	2020-04-03	12000
3	1101203	10115	Debit	2020-04-04	7000
4	1101204	10117	Credit	2020-04-14	22500
5	1101205	10118	Debit	2020-04-13	22500
6	1101206	10121	Debit	2020-04-11	16000
7	1101207	10119	Cash	2020-04-14	30000
8	1101208	10126	Credit	2020-04-07	9000
9	1101209	10130	Debit	2020-04-13	17500
10	1101301	10127	Debit	2020-04-13	15000
11	1101302	10111	Credit	2020-04-11	32000

select cust_id from cust_pay_rec where pay_mode = 'Credit';

Output pane

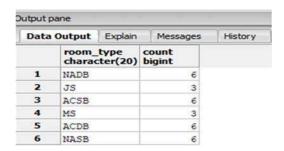|	cust_id integer
1	10117
2	10126
3	10127

FULL JOIN of room tariff and room information tables

select ri.room_no, ri.room_type, rt.room_des, ri.room_status, rt.room_tariff from
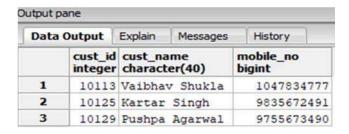room_info as ri full join room_t as rt on ri.room_type = rt.room_type;

room_no integer	room_type character(20)	room_des character(20)	room_status character(2)	room_tariff numeric(4,0)
1	103 NASB	NON AC Single bed	E	3000
2	104 NASB	NON AC Single bed	E	3000
3	105 NASB	NON AC Single bed	E	3000
4	201 NADB	NON AC Double bed	E	4000
5	202 NADB	NON AC Double bed	E	4000
6	204 NADB	NON AC Double bed	E	4000
7	206 NADB	NON AC Double bed	E	4000
8	302 ACSB	AC Single bed	E	3500
9	303 ACSB	AC Single bed	E	3500
10	304 ACSB	AC Single bed	E	3500
11	305 ACSB	AC Single bed	E	3500
12	306 ACSB	AC Single bed	E	3500
13	401 ACDB	AC Double bed	E	4500
14	402 ACDB	AC Double bed	E	4500
15	403 ACDB	AC Double bed	E	4500
16	404 ACDB	AC Double bed	E	4500
17	406 ACDB	AC Double bed	E	4500
18	501 JS	Junior suite	E	6000
19	503 JS	Junior suite	E	6000
20	504 MS	Master suite	E	8000
21	505 MS	Master suite	E	8000
22	506 MS	Master suite	E	8000
23	101 NASB	NON AC Single bed	O	3000
24	102 NASB	NON AC Single bed	O	3000
25	106 NASB	NON AC Single bed	O	3000
25	106 NASB	NON AC Single bed	O	3000
26	203 NADB	NON AC Double bed	O	4000
27	205 NADB	NON AC Double bed	O	4000
28	301 ACSB	AC Single bed	O	3500
29	405 ACDB	AC Double bed	O	4500
30	502 JS	Junior suite	O	6000

Count total number of rooms of each type.

select room_type, count(room_type) from room_info where room_type = any (select room_type from room_t) group by room_type;

Output pane

room_type character(20)	count bigint
1	NADB	6
2	JS	3
3	ACSB	6
4	MS	3
5	ACDB	6
6	NASB	6

Display id, name and phone number of customer who have occupied non AC single bed room

select cust_id,cust_name, mobile_no from customer_info where room_number in (select room_no from room_info where room_type = (select room_type from room_t where room_type = 'NASB') and room_status = 'O');

Output pane

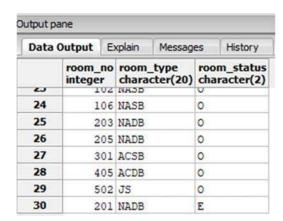| cust_id integer	cust_name character(40)	mobile_no bigint
1	10113	Vaibhav Shukla	1047834777
2	10125	Kartar Singh	9835672491
3	10129	Pushpa Agarwal	9755673490

TRANSACTION COMMANDS

```
begin;
update customer_info set mobile_no = 8821240011 where cust_id = 10113;
update customer_info set mobile_no = 7560324118 where cust_id = 10112;
savepoint A;
update customer_info set mobile_no = 7566324118 where cust_id = 10112;
rollback to A;
```


	cust_id integer	cust_name character(40)	address_1 character varying(30)	address_2 character varying(30)	address_3 character varying(30)	check_in_dt date	check_in_tm time without time zone	check_out_dt date	check_out_tm time without time zone	no_of_days integer	id character(15)	mobile_no bigint	room_ty character(4)	r
14	10129	Pushpa Agarw	defence colony kok	Goa Goa	India	2020-04-09	06:30:10	2020-04-13	11:10:10	5	Aadhar card	9755673490	NASB	
15	10130	Manisha Kuma	Pratap Enclave Pra	Hyderabad Telangan	India	2020-04-09	06:20:10	2020-04-13	11:10:10	5	Aadhar card	8935673490	NADB	
16	10111	Kanika kapoc	Manaya roofs Alok	Nagpur Maharastra	India	2020-04-08	06:20:10	2020-04-11	11:10:10	4	Aadhar card	9835573490	MS	
17	10126	Pulakit Samp	plt no 4 Laxmi nag	Goa Maharastra	India	2020-04-05	07:15:10	2020-04-07	11:10:10	2	Passport	7733673590	ACDB	
18	10117	Kishore Kuma	Mannat Gandhi naga	Rajkot Gujarat	India	2020-04-09	06:20:10	2020-04-13	11:10:10	5	Aadhar card	8835673490	ACDB	
19	10113	Vaibhav Shuk	Om Enclave Ulas na	Kanpur UP	India	2020-03-25	10:10:10	2020-03-30	12:10:10	5	Aadhar	8821240011	NASB	
20	10112	Vaibhavi Apt	Prakash Enclave Pr	Nagpur Maharastra	India	2020-03-20	11:10:10	2020-03-24	11:10:10	2	Aadhar	7560324118	NASB	

```
begin;
update room_info set room_status = 'E' where room_no = 201;
savepoint D;
update room_info set room_status = 'O' where room_no = 202;
rollback to D;
```


	room_no integer	room_type character(20)	room_status character(2)
23	102	NASB	O
24	106	NASB	O
25	203	NADB	O
26	205	NADB	O
27	301	ACSB	O
28	405	ACDB	O
29	502	JS	O
30	201	NADB	E

Module 2: Staff personnel

a) Staff information table

```
create table employee(
        emp_id  varchar(8)  NOT  NULL,
```

```
            emp_name  char(40)  NOT  NULL,
            DOB date,
            desig char(10),
            DOJ date NOT NULL,
            basic_sal    numeric(6,0) CHECK(basic_sal > 999),
            Aadhar_no    int UNIQUE,
            bank_name    char(15),
            Account_no int NOT NULL,
            PRIMARY KEY(emp_id)
        );
alter table employee alter column desig type char(18);
```

insert into employee values ('R1212','Praneeti Bajaj','1980-12-03','General Manager','2019-08-08','95000','3777456','SBI','23343434');

insert into employee values ('R1213','Pranoy Roy','1978-07-05',' Deputy Manager','2018-07-28','55000','3787456','SBI','22243434');

insert into employee values ('R1214','Gunjan Agarwal','1976-12-07','H.K Manager','2011-06-18','35000','310456','SBI','23344434');

insert into employee values ('R1215','Kanishka Bajpai','1985-02-09','Sr. Receiptionist','2010-05-22','35000','3766456','SBI','53343434');

insert into employee values ('R1216','Kishore Kumar','1983-11-07','Receptionist','2015-08-08','15000','3785256','SBI','43343434');

insert into employee values ('R1217','Komal Sinha','1982-10-05','Supervisor','2016-08-18','20000','3779456','SBI','21343434');

insert into employee values ('R1218','Deepen Garg','1964-06-08','Maint. Enigineer','2017-03-05','55500','3757456','SBI','22343434');

insert into employee values ('R1219','Manoj Tiwari','1992-05-03','Maint. Supervisor','2019-02-06','25000','3767456','SBI','25343434');

insert into employee values ('R1210','Pallavi Joshi','1990-12-30','Accountant','2010-09-09','30000','3774456','SBI','28343434');

insert into employee values ('R1211','Chandan Bajaj','1995-11-23','Accounts Manager','2014-11-08','55000','3737456','SBI','27343434');

insert into employee values ('R1312','Meena Bajaj','1980-12-03','Admin. Manager','2019-08-08','45000','3777656','SBI','23343434');

insert into employee values ('R1313','Purushotam Roy','1978-07-05','Clerk','2018-07-28','15000','3787476','SBI','22243434');

insert into employee values ('R1314','Keerti Agarwal','1976-12-07','Helper','2011-06-18','10000','310496','SBI','23344434');

insert into employee values ('R1315','Kokila Bajpai','1985-02-09','Helper','2010-05-22','12000','3766446','SBI','53343434');

insert into employee values ('R1316','Ambal Kumar','1983-11-07','Receptionist','2015-08-

08','15000','3785236','SBI','43343434');

insert into employee values ('R1317','Amar Sinha','1982-10-05','Supervisor','2016-08-18','20000','3719456','SBI','21343434');

insert into employee values ('R1318','Deepak Garg','1964-06-08','Maint. helper','2017-03-05','15500','3757406','SBI','22343434');

insert into employee values ('R1319','Manisha Tiwari','1992-05-03','H.K. Supervisor','2019-02-06','18000','3067456','SBI','25343434');
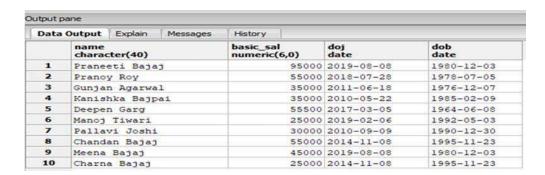
insert into employee values ('R1310','Pandu Joshi','1990-12-30','Worker','2010-09-09','13000','3774416','SBI','28343434');

insert into employee values ('R1311','Charna Bajaj','1995-11-23','Accounts Clerk','2014-11-08','25000','3633456','SBI','27343434');

SELECT * FROM employee;

Output pane

	e_id character varying(8)	name character(40)	dob date	desig character(18)	doj date	basic_sal numeric(6,0)	aadhar_no integer	bank_name character(15)	account_no integer
1	R1212	Praneeti Bajaj	1980-12-03	General Manager	2019-08-08	95000	3777456	SBI	23343434
2	R1213	Pranoy Roy	1978-07-05	Deputy Manager	2018-07-28	55000	3787456	SBI	22243434
3	R1214	Gunjan Agarwal	1976-12-07	H.K Manager	2011-06-18	35000	310456	SBI	23344434
4	R1215	Kanishka Bajpai	1985-02-09	Sr. Receiptionist	2010-05-22	35000	3766456	SBI	53343434
5	R1216	Kishore Kumar	1983-11-07	Receptionist	2015-09-08	15000	3785256	SBI	43343434
6	R1217	Komal Sinha	1982-10-05	Supervisor	2016-08-18	20000	3779456	SBI	21343434
7	R1218	Deepen Garg	1964-06-08	Maint. Enigineer	2017-03-05	55500	3757456	SBI	22343434
8	R1219	Manoj Tiwari	1992-05-03	Maint. Supervisor	2019-02-06	25000	3767456	SBI	25343434
9	R1210	Pallavi Joshi	1990-12-30	Accountant	2010-09-09	30000	3774456	SBI	28343434
10	R1211	Chandan Bajaj	1995-11-23	Accounts Manager	2014-11-08	55000	3737456	SBI	27343434
11	R1312	Meena Bajaj	1980-12-03	Admin. Manager	2019-08-08	45000	3777656	SBI	23343434
12	R1313	Purushotam Roy	1978-07-28	Clerk	2018-07-28	15000	3787476	SBI	22243434
13	R1314	Keerti Agarwal	1976-12-07	Helper	2011-06-18	10000	310496	SBI	23344434
14	R1315	Kokila Bajpai	1985-02-09	Helper	2010-05-22	12000	3766446	SBI	53343434
15	R1316	Ambal Kumar	1983-11-07	Receptionist	2015-08-08	15000	3785236	SBI	43343434
16	R1317	Amar Sinha	1982-10-05	Supervisor	2016-08-18	20000	3719456	SBI	21343434
17	R1318	Deepak Garg	1964-06-08	Maint. helper	2017-03-05	15500	3757406	SBI	22343434
18	R1319	Manisha Tiwari	1992-05-03	H.K. Supervisor	2019-02-06	18000	3067456	SBI	25343434
19	R1310	Pandu Joshi	1990-12-30	Worker	2010-09-09	13000	3774416	SBI	28343434
20	R1311	Charna Bajaj	1995-11-23	Accounts Clerk	2014-11-08	25000	3633456	SBI	27343434
21	R1410	Reema Shaha	1983-10-16	Accounts Clerk	2018-08-08	25000	3357890	SBI	24590118
22	R1411	Shashikal Raut	1995-10-16	Helper	2018-05-07	12000	3657810	SBI	14500118

select name, basic_sal, DOJ, DOB from employee where basic_sal > 20000;

Output pane

	name character(40)	basic_sal numeric(6,0)	doj date	dob date
1	Praneeti Bajaj	95000	2019-08-08	1980-12-03
2	Pranoy Roy	55000	2018-07-28	1978-07-05
3	Gunjan Agarwal	35000	2011-06-18	1976-12-07
4	Kanishka Bajpai	35000	2010-05-22	1985-02-09
5	Deepen Garg	55500	2017-03-05	1964-06-08
6	Manoj Tiwari	25000	2019-02-06	1992-05-03
7	Pallavi Joshi	30000	2010-09-09	1990-12-30
8	Chandan Bajaj	55000	2014-11-08	1995-11-23
9	Meena Bajaj	45000	2019-08-08	1980-12-03
10	Charna Bajaj	25000	2014-11-08	1995-11-23

select e_id, name, desig from employee where desig = 'Helper' or desig = 'Receptionist';

	e_id character varying(8)	name character(40)	desig character(18)
1	R1216	Kishore Kumar	Receptionist
2	R1314	Keerti Agarwal	Helper
3	R1315	Kokila Bajpai	Helper
4	R1316	Ambal Kumar	Receptionist

b) Employee leaves table

```
create table employee_leaves(
                emp_id      varchar(8) NOT NULL,
                leave_type char(8) CHECK(Leave_type IN('Medical','Casual','Earn')),
                from_dt     date NOT NULL,
                to_dt       date NOT NULL,
                no_of_days int,
                join_dt     date NOT NULL,
                last_leave_date date NOT NULL,
                FOREIGN KEY(emp_id)references employee(emp_id)
                );
ALTER TABLE customer_info ADD Pay_amt    numeric(4,0);
alter table customer_info drop Pay_amt;
```

insert into employee_leaves values ('R1312','Casual','2020-03-19','2020-03-20','2','2020-03-21','2020-01-15');
insert into employee_leaves values ('R1319','Casual','2020-03-11','2020-03-13','3','2020-03-14','2020-02-15');
insert into employee_leaves values ('R1310','Casual','2020-06-19','2020-06-19','1','2020-05-21','2020-04-25');
insert into employee_leaves values ('R1315','Casual','2020-03-19','2020-03-20','1','2020-03-21','2020-04-16');
insert into employee_leaves values ('R1212','Medical','2020-07-15','2020-07-20','6','2020-03-21','2020-01-25');
insert into employee_leaves values ('R1215','Casual','2020-02-17','2020-02-17','1','2020-02-18','2020-02-02');
insert into employee_leaves values ('R1311','Casual','2020-03-11','2020-03-11','1','2020-03-12','2020-02-25');
insert into employee_leaves values ('R1312','Medical','2020-05-19','2020-05-22','4','2020-05-23','2020-01-15');
insert into employee_leaves values ('R1310','Casual','2020-06-19','2020-06-20','2','2020-06-21','2020-03-15');
insert into employee_leaves values ('R1214','Casual','2020-05-11','2020-05-11','1','2020-05-12','2020-04-15');
insert into employee_leaves values ('R1317','Medical','2020-06-19','2020-06-28','10','2020-06-29','2020-03-16');
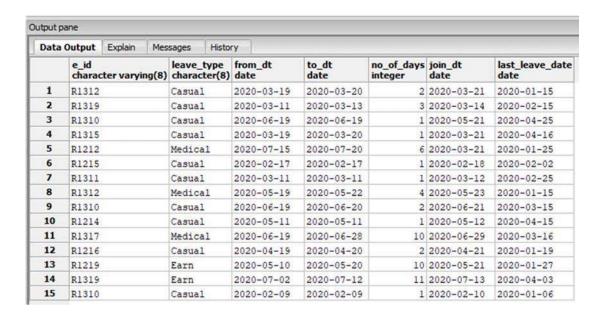insert into employee_leaves values ('R1216','Casual','2020-04-19','2020-04-20','2','2020-04-

21','2020-01-19');
insert into employee_leaves values ('R1219','Earn','2020-05-10','2020-05-20','10','2020-05-21','2020-01-27');
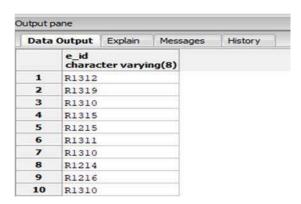insert into employee_leaves values ('R1319','Earn','2020-07-02','2020-07-12','11','2020-07-13','2020-04-03');
insert into employee_leaves values ('R1310','Casual','2020-02-09','2020-02-09','1','2020-02-10','2020-01-06');
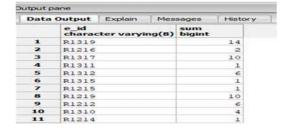
select * from employee_leaves;

Output pane

Data Output | Explain | Messages | History

	e_id character varying(8)	leave_type character(8)	from_dt date	to_dt date	no_of_days integer	join_dt date	last_leave_date date
1	R1312	Casual	2020-03-19	2020-03-20	2	2020-03-21	2020-01-15
2	R1319	Casual	2020-03-11	2020-03-13	3	2020-03-14	2020-02-15
3	R1310	Casual	2020-06-19	2020-06-19	1	2020-05-21	2020-04-25
4	R1315	Casual	2020-03-19	2020-03-20	1	2020-03-21	2020-04-16
5	R1212	Medical	2020-07-15	2020-07-20	6	2020-03-21	2020-01-25
6	R1215	Casual	2020-02-17	2020-02-17	1	2020-02-18	2020-02-02
7	R1311	Casual	2020-03-11	2020-03-11	1	2020-03-12	2020-02-25
8	R1312	Medical	2020-05-19	2020-05-22	4	2020-05-23	2020-01-15
9	R1310	Casual	2020-06-19	2020-06-20	2	2020-06-21	2020-03-15
10	R1214	Casual	2020-05-11	2020-05-11	1	2020-05-12	2020-04-15
11	R1317	Medical	2020-06-19	2020-06-28	10	2020-06-29	2020-03-16
12	R1216	Casual	2020-04-19	2020-04-20	2	2020-04-21	2020-01-19
13	R1219	Earn	2020-05-10	2020-05-20	10	2020-05-21	2020-01-27
14	R1319	Earn	2020-07-02	2020-07-12	11	2020-07-13	2020-04-03
15	R1310	Casual	2020-02-09	2020-02-09	1	2020-02-10	2020-01-06

select e_id from employee_leaves where leave_type = 'Casual';

Output pane

Data Output | Explain | Messages | History

	e_id character varying(8)
1	R1312
2	R1319
3	R1310
4	R1315
5	R1215
6	R1311
7	R1310
8	R1214
9	R1216
10	R1310

select e_id, sum(no_of_days) from employee_leaves group by e_id;

Output pane

Data Output | Explain | Messages | History

	e_id character varying(8)	sum bigint
1	R1319	14
2	R1216	2
3	R1317	10
4	R1311	1
5	R1312	6
6	R1315	1
7	R1215	1
8	R1219	10
9	R1212	6
10	R1310	4
11	R1214	1

SUB – QUERIES

Display ID, name, designation of employee took leave for more than 3 days select
e_id,name,desig from employee where e_id in(select e_id from employee_leaves where
no_of_days > 3);

Output pane

	e_id character varying(8)	name character(40)	desig character(18)
1	R1212	Praneeti Bajaj	General Manager
2	R1219	Manoj Tiwari	Maint. Supervisor
3	R1312	Meena Bajaj	Admin. Manager
4	R1317	Amar Sinha	Supervisor
5	R1319	Manisha Tiwari	H.K. Supervisor

Display ID, no_of_leaves of employee having salary less than 20000

select e_id, no_of_days from employee_leaves where e_id in(select e_id from employee
where basic_sal < 20000);

Output pane

	e_id character varying(8)	no_of_days integer
1	R1319	3
2	R1310	1
3	R1315	1
4	R1310	2
5	R1216	2
6	R1319	11
7	R1310	1

TRANSACTION COMMANDS

begin;
insert into employee values('R1410','Reema Shaha','1983-10-16','Accounts
Clerk','2018-08-08','25000','3357890','SBI','24590118');
insert into employee values('R1411','Shashikal Raut','1995-10-16','Helper','2018-05-
07','12000','3657810','SBI','14500118');
commit;
select * from employee;

Output pane

	e_id character varying(8)	name character(40)	dob date	desig character(18)	doj date	basic_sal numeric(6,0)	aadhar_no integer	bank_name character(15)	account_no integer
16	R1317	Amar Sinha	1982	Supervisor	2016	20000	3719456	SBI	21343434
17	R1318	Deepak Garg	1964	Maint. helpe	2017	15500	3757406	SBI	22343434
18	R1319	Manisha Tiwa	1992	H.K. Supervi	2019	18000	3067456	SBI	25343434
19	R1310	Pandu Joshi	1990	Worker	2010	13000	3774416	SBI	28343434
20	R1311	Charna Baja;	1995	Accounts Cle	2014	25000	3633456	SBI	27343434
21	R1410	Reema Shaha	1983	Accounts Cle	2018	25000	3357890	SBI	24590118
22	R1411	Shashikal Ra	1995	Helper	2018	12000	3657810	SBI	14500118

Module 3: Store module

a) Stock item details table

```
create table stock_item_details
(
 item_name char(30) unique,
 item_code int not null unique,
 item_type varchar(10) not null,
 item_value int unique not null,
 item_quantity int,
 item_uq char(3),
 item_rate int not null,
 item_last_date_of_buy date not null,
 min_stock int not null,
 primary key(item_code)
);

alter table stock_item_details alter column item_name type char(20);
alter table stock_item_details drop item_uq;
alter table stock_item_details alter column item_type type char(25);
alter table stock_item_details drop item_value;
alter table stock_item_details add item_value int;

insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Toilet Paper',12500655,'Sanitary',3000,100,30,'2020-01-01',30);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Facewash',89627804,'Complementary',500,100,5,'2020-01-
01',30);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Shampoo',34871009,'Complementary',500,100,5,'2020-01-
02',30);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Toilet Brush',87540094,'Cleaner',2700,90,30,'2020-01-02',50);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Bed sheet',33994477,'Linen',40500,45,900,'2020-01-03',42);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Detergent',87382933,'Laundry',4000,100,40,'2020-01-03',70);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
```
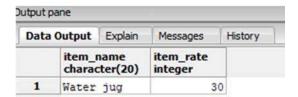
_date_of_buy,min_stock) values('Dusting Cloth',33882970,'Cleaning',600,30,20,'2020-01-04',10);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Mops',67386283,'Cleaning',1200,30,40,'2020-01-04',10);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Toilet cleaner',27382700,'Cleaning',8000,100,80,'2020-01-05',50);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock) values('Soap',46800229,'Complementary',4000,100,40,'2020-01-05',50);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock)values('Water   jug',63598003,'Crockery',900,30,30,'2020-01-06',10);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock)values('Trays',577883300,'Daily use',200,10,20,'2020-01-06',6);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock)values('Towels',68889228,'Linen',4000,45,100,'2020-01-07',40);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock)values('Blankets',70282987,'Linen',20000,45,500,'2020-01-07',40);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock)values('Handwash',44488003,'Sanitary',10000,100,100,'2020-01-07',50);
insert into
stock_item_details(item_name,item_code,item_type,item_value,item_quantity,item_rate,item_last
_date_of_buy,min_stock)values('Glasses',43588002,'Crockery',6000,60,100,'2020-01-07',40);

select * from stock_item_details;

Output pane

Data Output | Explain | Messages | History

	item_name character(20)	item_code integer	item_type character(25)	item_quantity integer	item_rate integer	item_last_date_of_buy date	min_stock integer	item_value integer
1	Toilet Paper	12500655	Sanitary	100	30	2020-01-01	30	3000
2	Facewash	89627804	Complementary	100	5	2020-01-01	30	500
3	Shampoo	34871009	Complementary	100	5	2020-01-02	30	500
4	Toilet Brush	87540094	Cleaner	90	30	2020-01-02	50	2700
5	Bed sheet	33994477	Linen	45	900	2020-01-03	42	40500
6	Detergent	87382933	Laundry	100	40	2020-01-03	70	4000
7	Dusting Cloth	33882970	Cleaning	30	20	2020-01-04	10	600
8	Mops	67386283	Cleaning	30	40	2020-01-04	10	1200
9	Toilet cleaner	27382700	Cleaning	100	80	2020-01-05	50	8000
10	Soap	46800229	Complementary	100	40	2020-01-05	50	4000
11	Water jug	63598003	Crockery	30	30	2020-01-06	10	900
12	Trays	577883300	Daily use	10	20	2020-01-06	6	200
13	Towels	68889228	Linen	45	100	2020-01-07	40	4000
14	Blankets	70282987	Linen	45	500	2020-01-07	40	20000
15	Handwash	44488003	Sanitary	100	100	2020-01-07	50	10000
16	Glasses	43588002	Crockery	60	100	2020-01-07	40	6000
17	Sanitizer	37448267	Complementai	100	40	2020-01-08	20	4000

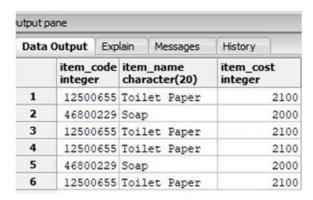select item_name , item_rate from stock_item_details where item_code= 63598003;

	item_name character(20)	item_rate integer
1	Water jug	30

select count(item_name)from stock_item_details where min_stock between 10 and 50;

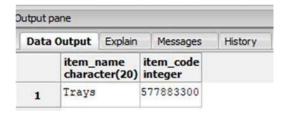|	count bigint
1	14

SUB – QUERIES

display the rate of all items which are greater than the rate of item_code=87382933.
select sid.item_code, sid.item_name, p.item_cost from stock_item_details as sid, purchase as p where sid.item_code = p.item_code and p.item_cost >
(select distinct item_cost from purchase where item_code = 87382933);

	item_code integer	item_name character(20)	item_cost integer
1	12500655	Toilet Paper	2100
2	46800229	Soap	2000
3	12500655	Toilet Paper	2100
4	12500655	Toilet Paper	2100
5	46800229	Soap	2000
6	12500655	Toilet Paper	2100

display name of items whose quantity is less than 10
select item_name, item_code from stock_item_details where item_code in(select item_code from purchase where quantity < 10);

	item_name character(20)	item_code integer
1	Trays	577883300

```sql
create table capital_inventory
(
inventory_number int not null unique,
inv_name char not null,
brand_name char not null,
installment_date  date not null,
maintainance_duration  varchar not null,
primary key(inventory_number)
);
alter table capital_inventory  alter column  inv_name type char(20);
alter table capital_inventory  alter column  brand_name type char(20);
alter table capital_inventory  alter column  maintainance_duration type varchar(7);
alter table capital_inventory  rename column  maintainance_duration to maintenance_duration;
alter table capital_inventory  alter column  maintenance_duration  type varchar(10);

insert into capital_inventory  values(73873877,'AC','Samsung','2018-04-05','1 year');
insert into capital_inventory  values(78634783,'Bed','Gordrej','2019-07-09','null');
insert into capital_inventory  values(35657534,'Chair','Neelkamal','2018-07-11','null');
insert into capital_inventory  values(67837463,'TV','Panasonic','2018-07-12','1  year');
insert into capital_inventory  values(86643467,'Fan','USHA','2018-07-13','1  year');
insert into capital_inventory  values(74837483,'Tube  light','Syska','2020-07-15','1  year');
insert into capital_inventory  values(53667742,'Washing  machine','Whirlpool','2018-07-17','6 months');
insert into capital_inventory  values(80755008,'Computers','Acer','2018-07-19','1  year');
insert into capital_inventory  values(56634567,'Telephone','Verizon','2020-07-19','6  months');
insert into capital_inventory  values(64836884,'Water Geyser','Bajaj','2019-07-20','6  months');
insert into capital_inventory  values(53735727,'Cupboard','Gordrej','2020-07-21','null');
insert into capital_inventory  values(75687890,'Table','Gordrej','2020-07-21','null');
insert into capital_inventory  values(83749477,'Refrigerator','Samsung','2018-07-22','6  months');
insert into capital_inventory  values(58979708,'Sofa','Comfort','2020-07-22','null');
insert into capital_inventory  values(57897890,'Bed  lamp','Philips','2018-07-23','6  months');
insert into capital_inventory  values(89088760,'Mattress','Gordrej','2020-07-23','null');
insert into capital_inventory  values(98897778,'Pillow','Sleepwell','2020-07-24','null');
insert into capital_inventory  values(69977088,'Clock','Ajanta','20218-07-24','3  month');
insert into capital_inventory  values(46746744,'Fire  extingusher','Safeu','2020-07-26','1  year');
insert into capital_inventory  values(77689799,'Generator','Kirloskar','2018-07-28','6  months');
insert into capital_inventory  values(48440001,'Water pump','Kirloskar','2020-06-15','6 months');
insert into capital_inventory  values(34562901,'Sewing  machine','USHA','2018-03-14','1 month');
insert into capital_inventory  values(34552802,'Bed side table','Gordrej','2018-03-14','1 month');

select * from capital_inventory;
```

	inventory_number integer	inv_name character(20)	brand_name character(20)	installment_date date	maintenance_duration character varying(10)
1	73873877	AC	Samsung	2018-04-05	1 year
2	78634783	Bed	Gordrej	2019-07-09	null
3	35657534	Chair	Neelkamal	2018-07-11	null
4	67837463	TV	Panasonic	2018-07-12	1 year
5	86643467	Fan	USHA	2018-07-13	1 year
6	74837483	Tube light	Syska	2020-07-15	1 year
7	53667742	Washing machir	Whirlpool	2018-07-17	6 months
8	80755008	Computers	Acer	2018-07-19	1 year
9	56634567	Telephone	Verizon	2020-07-19	6 months
10	64836884	Water Geyser	Bajaj	2019-07-20	6 months
11	53735727	Cupboard	Gordrej	2020-07-21	null
12	75687890	Table	Gordrej	2020-07-21	null
13	83749477	Refrigerator	Samsung	2018-07-22	6 months
14	58979708	Sofa	Comfort	2020-07-22	null
15	57897890	Bed lamp	Philips	2018-07-23	6 months
16	89088760	Mattress	Gordrej	2020-07-23	null
17	98897778	Pillow	Sleepwell	2020-07-24	null
18	69977088	Clock	Ajanta	20218-07-24	3 month
19	46746744	Fire extingush	Safeu	2020-07-26	1 year
20	77689799	Generator	Kirloskar	2018-07-28	6 months
21	48440001	Water pump	Kirloskar	2020-06-15	6 months
22	34562901	Sewing machine	USHA	2018-03-14	1 month
23	34552802	Bed side table	Gordrej	2018-03-14	1 month

select inv_name,brand_name from capital_inventory where maintenance_duration = '6 months' or maintenance_duration = 'null';

	inv_name character(20)	brand_name character(20)
1	Bed	Gordrej
2	Chair	Neelkamal
3	Washing machine	Whirlpool
4	Telephone	Verizon
5	Water Geyser	Bajaj
6	Cupboard	Gordrej
7	Table	Gordrej
8	Refrigerator	Samsung
9	Sofa	Comfort
10	Bed lamp	Philips
11	Mattress	Gordrej
12	Pillow	Sleepwell
13	Generator	Kirloskar
14	Water pump	Kirloskar

TRANSACTION COMMANDS

begin;
delete from capital_inventory where inventory_number = 73873877 ;
commit;

select * from capital_inventory;

	inventory_number integer	inv_name character(20)	brand_name character(20)	installment_date date	maintenance_duration character varying(10)
1	78634783	Bed	Gordrej	2019-07-09	null
2	35657534	Chair	Neelkamal	2018-07-11	null
3	67837463	TV	Panasonic	2018-07-12	1 year
4	86643467	Fan	USHA	2018-07-13	1 year
5	74837483	Tube light	Syska	2020-07-15	1 year
6	53667742	Washing macl	Whirlpool	2018-07-17	6 months
7	80755008	Computers	Acer	2018-07-19	1 year
8	56634567	Telephone	Verizon	2020-07-19	6 months

begin;
insert into capital_inventory values(87674673,'Heater','Philips','2018-04-07','1 year');
select * from capital_inventory;

	inventory_number integer	inv_name character(20)	brand_name character(20)	installment_date date	maintenance_duration character varying(10)
17	69977088	Clock	Ajanta	20218-07-24	3 month
18	46746744	Fire extingu	Safeu	2020-07-26	1 year
19	77689799	Generator	Kirloskar	2018-07-28	6 months
20	48440001	Water pump	Kirloskar	2020-06-15	6 months
21	34562901	Sewing machi	USHA	2018-03-14	1 month
22	34552802	Bed side tak	Gordrej	2018-03-14	1 month
23	87674673	Heater	Philips	2018-04-07	1 year

update capital_inventory set inv_name = 'Night lamp' where inventory_number = 87674673 ;
select * from capital_inventory;
savepoint A;

	inventory_number integer	inv_name character(20)	brand_name character(20)	installment_date date	maintenance_duration character varying(10)
17	69977088	Clock	Ajanta	20218-07-24	3 month
18	46746744	Fire extingu	Safeu	2020-07-26	1 year
19	77689799	Generator	Kirloskar	2018-07-28	6 months
20	48440001	Water pump	Kirloskar	2020-06-15	6 months
21	34562901	Sewing machi	USHA	2018-03-14	1 month
22	34552802	Bed side tak	Gordrej	2018-03-14	1 month
23	87674673	Night lamp	Philips	2018-04-07	1 year

insert into capital_inventory values(97473889,'Tubelight','philips','2018-06-09','6 months');
savepoint B;

	inventory_number integer	inv_name character(20)	brand_name character(20)	installment_date date	maintenance_duration character varying(10)
18	46746744	Fire extingu	Safeu	2020-07-26	1 year
19	77689799	Generator	Kirloskar	2018-07-28	6 months
20	48440001	Water pump	Kirloskar	2020-06-15	6 months
21	34562901	Sewing machi	USHA	2018-03-14	1 month
22	34552802	Bed side tak	Gordrej	2018-03-14	1 month
23	87674673	Night lamp	Philips	2018-04-07	1 year
24	97473889	Tubelight	philips	2018-06-09	6 months

rollback to A;
select * from capital_inventory ;

	inventory_number integer	inv_name character(20)	brand_name character(20)	installment_date date	maintenance_duration character varying(10)
17	69977088	Clock	Ajanta	20218-07-24	3 month
18	46746744	Fire extingu	Safeu	2020-07-26	1 year
19	77689799	Generator	Kirloskar	2018-07-28	6 months
20	48440001	Water pump	Kirloskar	2020-06-15	6 months
21	34562901	Sewing machi	USHA	2018-03-14	1 month
22	34552802	Bed side tak	Gordrej	2018-03-14	1 month
23	87674673	Night lamp	Philips	2018-04-07	1 year

Module 4: Maintenance module

```
create table maintenance
(
  inv_code     varchar(8) not null,
  breakdown_dt date not null,
  restoration_dt date not null,
  breakdown_type char(10) not null,
  breakdown_nature char(10),
  repair_charges   int not null,
  primary key(inv_code)
);
alter table maintenance drop breakdown_nature;
alter table maintenance drop inv_code;
alter table maintenance add column inv_code int;
alter table maintenance add foreign key(inv_code) references
capital_inventory(inventory_number)  on delete cascade on update cascade;
```

insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('73873877','2020-04-05','2020-04-08','Electrical',13000);
insert into maintenance

(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('35657534','2020-04-02','2020-04-04','Electrical',3000);
insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('86643467','2020-04-03','2020-04-04','Electrical',1000);
insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('74837483','2020-04-02','2020-04-04','Electrical',1000);
insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('53667742','2020-04-06','2020-04-06','Electrical',4000);
insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('80755008','2020-05-02','2020-05-04','Electrical',15000);
insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('64836884','2020-05-03','2020-05-04','Electrical',20000);
insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('46746744','2020-05-04','2020-05-06','Serviceing',14000);
insert into maintenance
(inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)values('77689799','2020-05-07','2020-05-08','Electrical',33000);
insert into maintenance (inv_code,breakdown_dt,restoration_dt,breakdown_type,repair_charges)
values('34562901','2020-06-02','2020-06-04','Mechanical',2000);

select * from maintenance;

Output pane

Data Output | Explain | Messages | History

	inv_code character varying(8)	breakdown_dt date	restoration_dt date	breakdown_type character(10)	repair_charges integer
1	73873877	2020-04-05	2020-04-08	Electrical	13000
2	35657534	2020-04-02	2020-04-04	Electrical	3000
3	86643467	2020-04-03	2020-04-04	Electrical	1000
4	74837483	2020-04-02	2020-04-04	Electrical	1000
5	53667742	2020-04-06	2020-04-06	Electrical	4000
6	80755008	2020-05-02	2020-05-04	Electrical	15000
7	64836884	2020-05-03	2020-05-04	Electrical	20000
8	46746744	2020-05-04	2020-05-06	Serviceing	14000
9	77689799	2020-05-07	2020-05-08	Electrical	33000
10	34562901	2020-06-02	2020-06-04	Mechanical	2000

LEFT JOIN of capital inventory and maintenance tables

select
inv_name,brand_name,maintenance_duration,breakdown_type,repair_charges
from   capital_inventory left outer join maintenance on
inventory_number=inv_code;

**display inventory number, inv_name ,brand_name, installment_date,
maintainance_duration where repair_charges are greater than or
equal to 15000.** select * from capital_inventory where inventory_number
in(select inv_code from maintenance where repair_charges >= 15000);

Module 5: Purchase module

create
table
purch

```
ase (
order_number int
not null  unique,
date_of_buy date
not null,  quantity
int not null,
rate int not null,
item_code int
unique  not null,
delivery_date date
not null,
order_status
varchar,
primary key(order_number)
);

alter table purchase alter column  order_status type varchar(8);
alter table purchase add check (order_status in
('open','close','paropen')); alter table purchase rename
column  rate to cost;
alter table purchase rename column cost
to item_cost; alter table purchase drop
item_code;
alter table purchase add
item_code int; alter table
purchase drop
order_number; alter table
purchase add order_number
int;
alter table purchase alter column  order_number
set not null;  alter table purchase add foreign
key(item_code)references
stock_item_details(item_code) on delete cascade on update cascade;

insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,deliver
y_date,order_ status)values(2011030,'2020-03-
03',70,2100,12500655,'2020-03-04','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,deliver
y_date,order_ status)values(2011031,'2020-03-04',70,350,89627804,'2020-
03-06','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery_date
,order_status)values(2011032,'2020-03-05',70,350,34871009,'2020-03-
07','close');
```

```sql
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011033,'2020-04-
03',40,1200,87540094,'2020-04-05','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011034,'2020-04-
05',30,1200,87382933,'2020-04-07','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,deliver
y_date,order_ status)values(2011035,'2020-04-
06',10,200,33882970,'2020-03-07','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,deliver
y_date,order_ status)values(2011036,'2020-05-
03',50,2000,46800229,'2020-05-04','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,deliver
y_date,order_ status)values(2011037,'2020-05-
03',4,80,577883300,'2020-05-04','close');

insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011038,'2020-05-
04',70,2100,12500655,'2020-05-05','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011039,'2020-05-
05',60,300,348710094,'2020-05-06','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011040,'2020-05-
03',70,2100,12500655,'2020-05-04','close');

insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011041,'2020-05-
04',70,350,89627804,'2020-05-06','close');

insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011042,'2020-05-
05',70,350,34871009,'2020-05-07','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery
_date,order_ status)values(2011043,'2020-06-
```
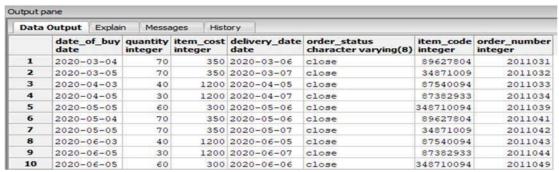
03',40,1200,87540094,'2020-06-05','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery_date,order_ status)values(2011044,'2020-06-05',30,1200,87382933,'2020-06-07','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery_date,order_ status)values(2011045,'2020-06-06',10,200,33882970,'2020-06-07','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery_date,order_ status)values(2011046,'2020-06-03',50,2000,46800229,'2020-06-04','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery_date,order_ status)values(2011047,'2020-06-03',4,80,577883300,'2020-06-04','close');
insert into

purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery_date,order_ status)values(2011048,'2020-06-04',70,2100,12500655,'2020-06-05','close');
insert into
purchase(order_number,date_of_buy,quantity,item_cost,item_code,delivery_date,order_ status)values(2011049,'2020-06-05',60,300,348710094,'2020-06-06','close');

select * from purchase;

Output pane

Data Output | Explain | Messages | History

	date_of_buy date	quantity integer	item_cost integer	delivery_date date	order_status character varying(8)	item_code integer	order_number integer
1	2020-03-03	70	2100	2020-03-04	close	12500655	2011030
2	2020-03-04	70	350	2020-03-06	close	89627804	2011031
3	2020-03-05	70	350	2020-03-07	close	34871009	2011032
4	2020-04-03	40	1200	2020-04-05	close	87540094	2011033
5	2020-04-05	30	1200	2020-04-07	close	87382933	2011034
6	2020-04-06	10	200	2020-03-07	close	33882970	2011035
7	2020-05-03	50	2000	2020-05-04	close	46800229	2011036
8	2020-05-03	4	80	2020-05-04	close	577883300	2011037
9	2020-05-04	70	2100	2020-05-05	close	12500655	2011038
10	2020-05-05	60	300	2020-05-06	close	348710094	2011039
11	2020-05-03	70	2100	2020-05-04	close	12500655	2011040
12	2020-05-04	70	350	2020-05-06	close	89627804	2011041
13	2020-05-05	70	350	2020-05-07	close	34871009	2011042
14	2020-06-03	40	1200	2020-06-05	close	87540094	2011043
15	2020-06-05	30	1200	2020-06-07	close	87382933	2011044
16	2020-06-06	10	200	2020-06-07	close	33882970	2011045
17	2020-06-03	50	2000	2020-06-04	close	46800229	2011046
18	2020-06-03	4	80	2020-06-04	close	577883300	2011047
19	2020-06-04	70	2100	2020-06-05	close	12500655	2011048
20	2020-06-05	60	300	2020-06-06	close	348710094	2011049

select * from purchase where item_cost between 300 and 1200 and order_status = 'close';

	date_of_buy date	quantity integer	item_cost integer	delivery_date date	order_status character varying(8)	item_code integer	order_number integer
1	2020-03-04	70	350	2020-03-06	close	89627804	2011031
2	2020-03-05	70	350	2020-03-07	close	34871009	2011032
3	2020-04-03	40	1200	2020-04-05	close	87540094	2011033
4	2020-04-05	30	1200	2020-04-07	close	87382933	2011034
5	2020-05-05	60	300	2020-05-06	close	348710094	2011039
6	2020-05-04	70	350	2020-05-06	close	89627804	2011041
7	2020-05-05	70	350	2020-05-07	close	34871009	2011042
8	2020-06-03	40	1200	2020-06-05	close	87540094	2011043
9	2020-06-05	30	1200	2020-06-07	close	87382933	2011044
10	2020-06-05	60	300	2020-06-06	close	348710094	2011049

INNER JOIN of Stock item details and purchase tables

select sid.item_name, sid.item_type, pur.order_number, pur.date_of_buy from stock_item_details as sid inner join purchase as pur on sid.item_code=pur.item_code;

	item_name character(20)	item_type character(25)	order_number integer	date_of_buy date
1	Toilet Paper	Sanitary	2011030	2020-03-03
2	Facewash	Complementary	2011031	2020-03-04
3	Shampoo	Complementary	2011032	2020-03-05
4	Toilet Brush	Cleaner	2011033	2020-04-03
5	Detergent	Laundry	2011034	2020-04-05
6	Dusting Cloth	Cleaning	2011035	2020-04-06
7	Soap	Complementary	2011036	2020-05-03
8	Trays	Daily use	2011037	2020-05-03
9	Toilet Paper	Sanitary	2011038	2020-05-04
10	Toilet Paper	Sanitary	2011040	2020-05-03
11	Facewash	Complementary	2011041	2020-05-04
12	Shampoo	Complementary	2011042	2020-05-05
13	Toilet Brush	Cleaner	2011043	2020-06-03
14	Detergent	Laundry	2011044	2020-06-05
15	Dusting Cloth	Cleaning	2011045	2020-06-06
16	Soap	Complementary	2011046	2020-06-03
17	Trays	Daily use	2011047	2020-06-03
18	Toilet Paper	Sanitary	2011048	2020-06-04

FULL JOIN of stock item details and purchase tables

select sid.item_name, sid.item_value, sid.item_quantity, pur.delivery_date , pur.order_status from stock_item_details as sid full outer join purchase as pur on sid.item_code = pur.item_code;

	item_name character(20)	item_value integer	item_quantity integer	delivery_date date	order_status character varying(8)
1	Toilet Paper	3000	100	2020-03-04	close
2	Facewash	500	100	2020-03-06	close
3	Shampoo	500	100	2020-03-07	close
4	Toilet Brush	2700	90	2020-04-05	close
5	Detergent	4000	100	2020-04-07	close
6	Dusting Clot	600	30	2020-03-07	close
7	Soap	4000	100	2020-05-04	close
8	Trays	200	10	2020-05-04	close
9	Toilet Paper	3000	100	2020-05-05	close
11	Toilet Paper	3000	100	2020-05-04	close
12	Facewash	500	100	2020-05-06	close
13	Shampoo	500	100	2020-05-07	close
14	Toilet Brush	2700	90	2020-06-05	close
15	Detergent	4000	100	2020-06-07	close
16	Dusting Clot	600	30	2020-06-07	close
17	Soap	4000	100	2020-06-04	close
18	Trays	200	10	2020-06-04	close
19	Toilet Paper	3000	100	2020-06-05	close
21	Handwash	10000	100		
22	Glasses	6000	60		
23	Towels	4000	45		
24	Water jug	900	30		
25	Toilet clear	8000	100		
26	Blankets	20000	45		

FUTURESCOPE –

India is being considered as one of the most popular travel destinations in the world , Tourism contributed 6.9% to our country's GDP in 2015 and almost 8.7% of the employment. And this sector is expected to grow tremendously, roughly 7.5% of our GDP by 2025.
Today, Hotel Management is not only restricted to hotels but has gone a long way to catering, clubs, food and beverage industry, resorts, airlines, cruise and many more. The hotel management forms a big part of the tourism, and the government too is in favor of investing in it and supporting it in every way possible.
Apart from glamour which is being considered as one of the important factor for students opting for hotel management, the perks, lucrative packages, and a myriad of career opportunities crossing the social, cultural and national boundaries also attract students to see themselves in this profession.
Being in this industry, one may be expected to work in the following departments, i.e., management, housekeeping, hospitality, front office operations, marketing and sales, accounts etc.

Read more at: https://yourstory.com/mystory/80cbeec379-future-and-scope-of-hotel-management-in-india

CONCLUSION –

Hotel management system now-a-day have the advantage of modernization. Computer have done the work more easy . Computer is playing a important role in management. Reports are made on daily basis for every customer check in or check out which can easily be seen by the management. Hotel management system has also primary purpose is to provide facilities to customers. A software for computers makes the things many times easy, these are made as user friendly and to keep a check and balance in hotel management and accounts as well. So , these things are important.

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