



BICT.Honours in Information & Communication Technology

ICT1222 (P) Database Management Systems Practicum

Level 1- Semester 2 | 2022

Lecturer : Ms. Malsha

Practical 7 Part-A,B

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Student No : TG/2020/749

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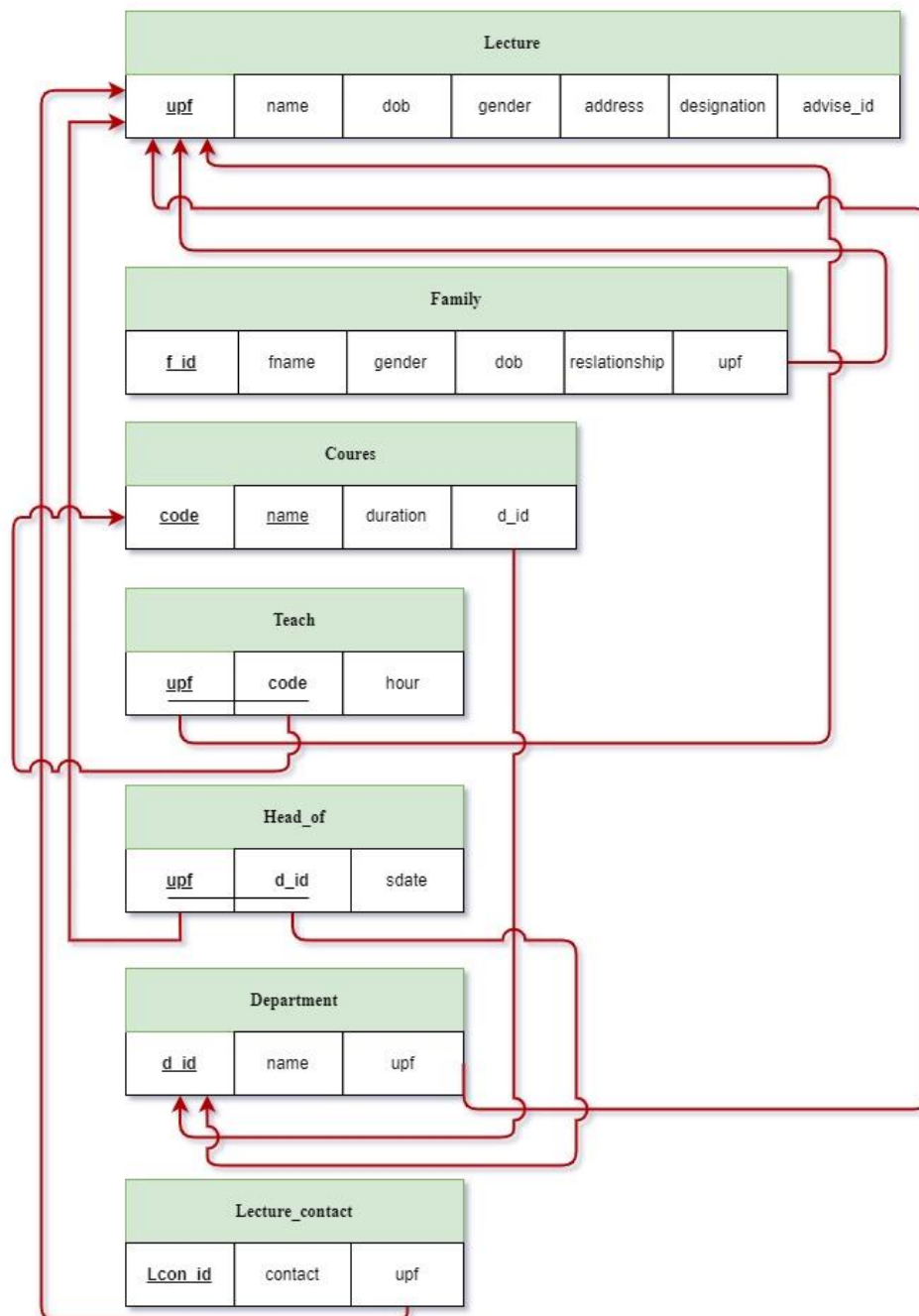
Practical 7 Part-A,B

Student No: **TG/2020/749**

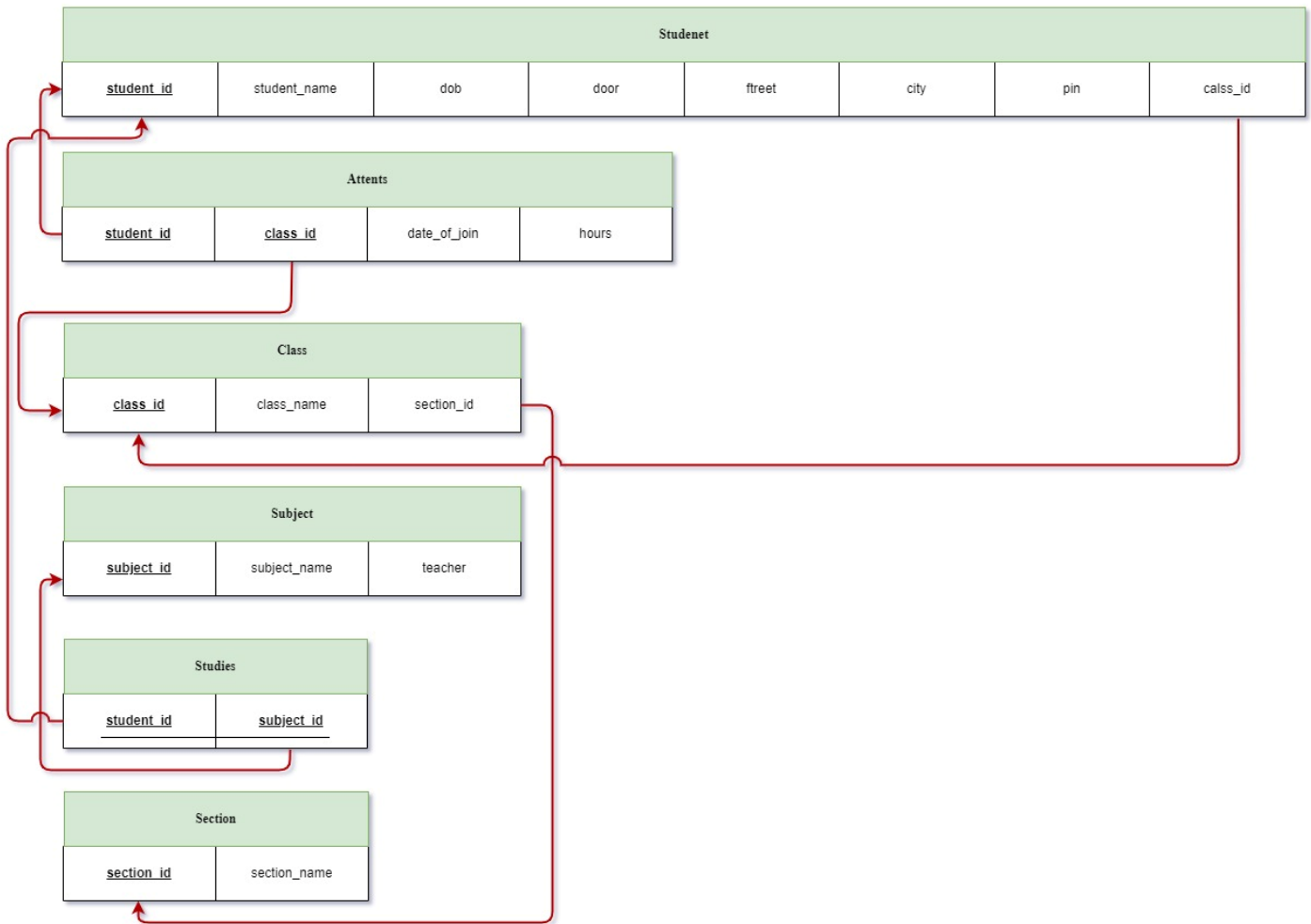
Student Name: **H.P.G. Lahiru Prasad Jayathilake**

Part-A

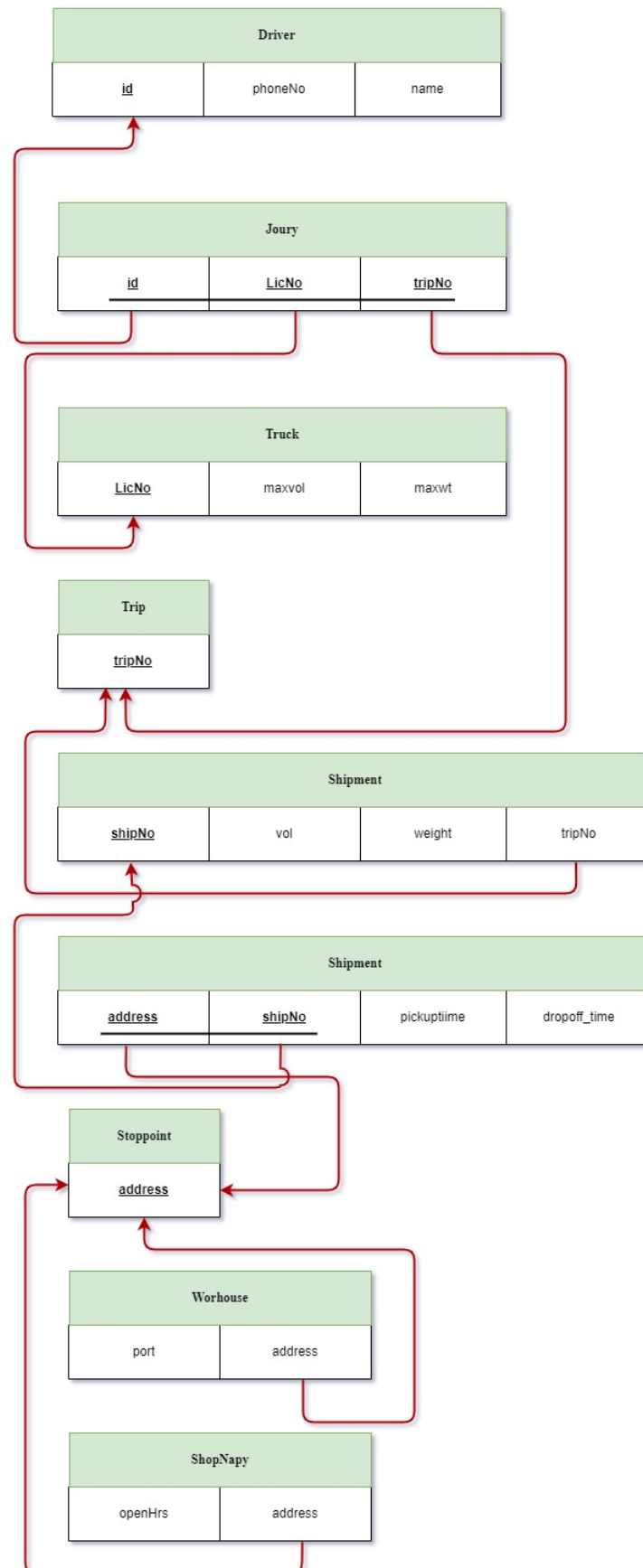
1.



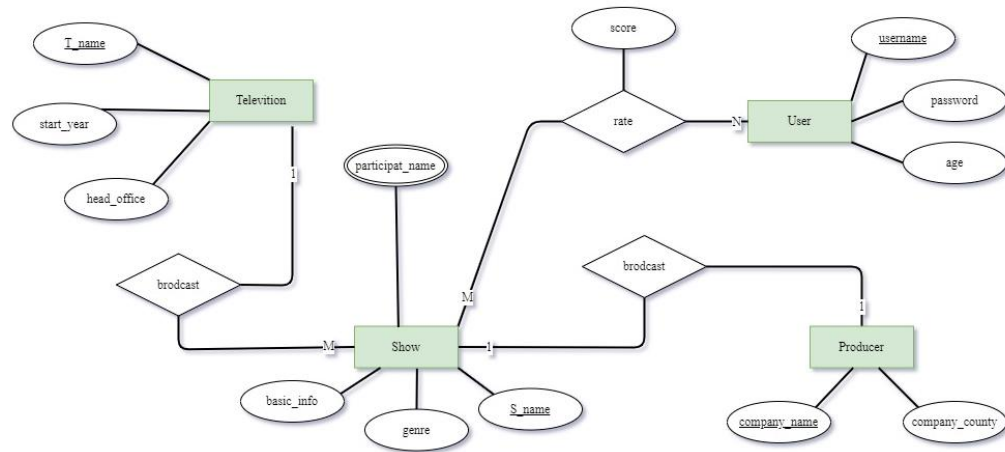
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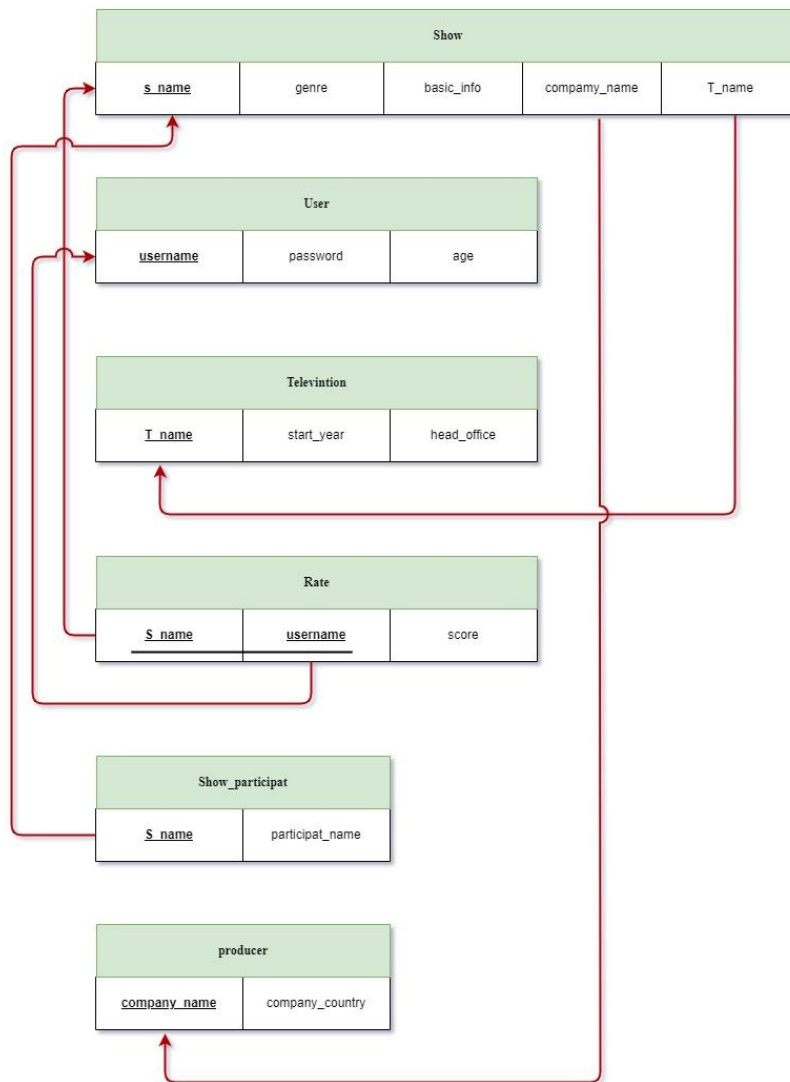
3.



4.ER



4. Relational schema



Part-B

```
CREATE DATABASE practical07_B;
```

```
USE practical07_B;
```

```
CREATE TABLE EMPLOYEE (  
  EMPLOYEE_ID INT PRIMARY KEY,  
  FIRST_NAME VARCHAR(20),  
  LAST_NAME VARCHAR(20),  
  EMAIL VARCHAR(40),  
  PHONE_NUMBER VARCHAR(20),  
  HIRE_DATE DATE,  
  JOB_ID VARCHAR(10),  
  SALARY DECIMAL(8,2),  
  COMMISSION_PCT DECIMAL(6,2),  
  MANAGER_ID INT,  
  DEPARTMENT_ID INT);
```

```
CREATE TABLE CUST (  
  CUST_CODE VARCHAR(10) PRIMARY KEY,  
  CUST_NAME VARCHAR(20),  
  CUST_CITY VARCHAR(20),  
  WORKING_AREA VARCHAR(20),  
  CUST_COUNTRY VARCHAR(20),  
  GRADE INT,  
  OPENING_AMT DECIMAL(8,2),  
  RECEIVE_AMT DECIMAL(8,2),  
  PAYMENT_AMT DECIMAL(8,2),  
  OUTSTANDING_AMT DECIMAL(8,2),  
  PHONE_NO VARCHAR(15),  
  AGENT_CODE VARCHAR(10)  
);
```

```
CREATE TABLE SALESMAN (  
  SALESMAN_ID INT PRIMARY KEY,  
  NAME VARCHAR(30),  
  CITY VARCHAR(20),  
  COMMISSION DECIMAL(4,4)  
);
```

```
CREATE TABLE CUSTOMER (  
  CUSTOMER_ID INT PRIMARY KEY,  
  CUST_NAME VARCHAR(30),  
  CITY VARCHAR(20),  
  GRADE INT,  
  SALESMAN_ID INT,  
  FOREIGN KEY(SALESMAN_ID) REFERENCES SALESMAN(SALESMAN_ID)  
);
```

```

INSERT INTO
EMPLOYEE(EMPLOYEE_ID,FIRST_NAME,LAST_NAME,EMAIL,PHONE_NUMBER,HIRE_DATE,JOB_ID,SAL
ARY,COMMISSION_PCT,MANAGER_ID,DEPARTMENT_ID)
VALUES
(100,"Steven","King","SKING","515.123.4567","1987-06-17","AD_PRES",24000.00,0.00,0,90),
(101,"Neena","Kochhar","NKOCHHAR","515.123.4568","1987-06-18","AD_VP",17000.00,0.00,100,90),
(102,"Lex","De Haan","LDEHAAN","515.123.4569","1987-06-19","AD_VP",17000.00,0.00,100,90),
(103,"Alexander","Hunold","AHUNOLD","590.423.4567","1987-06-
20","IT_PROG",9000.00,0.00,102,60),
(104,"Bruce","Ernst","BERNST","590.423.4568","1987-06-21","IT_PROG",6000.00,0.00,103,60),
(105,"David","Austin","DAUSTIN","590.423.4569","1987-06-22","IT_PROG",4800.00,0.00,103,60),
(106,"Valli","Pataballa","VPATABAL","590.423.4560","1987-06-23","IT_PROG",4800.00,0.00,103,60),
(107,"Diana","Lorentz","DLORENTZ","590.423.5567","1987-06-24","IT_PROG",4200.00,0.00,103,60);

```

```

INSERT INTO CUST
(CUST_CODE,CUST_NAME,CUST_CITY,WORKING_AREA,CUST_COUNTRY,GRADE,OPENING_AMT,RECEIV
E_AMT,PAYMENT_AMT,OUTSTANDING_AMT,PHONE_NO,AGENT_CODE)
VALUES
('C00013','Holmes','London','London','UK',2,6000.00,5000.00,7000.00,4000.00,'BBBBBBB','A003'),
('C00001','Micheal','New York','New York','USA',2,3000.00,5000.00,2000.00,6000.00,'CCCCCCC','A008'),
('C00020','Albert','New York','New York','USA',3,5000.00,7000.00,6000.00,6000.00,'BBBBSBB','A008'),
('C00025','Ravindran','Bangalore','Bangalore','India',2,5000.00,7000.00,4000.00,8000.00,'AVAVAVA','A
011'),
('C00024','Cook','London','London','UK',2,4000.00,9000.00,7000.00,6000.00,'FSDDSDDF','A006'),
('C00015','Stuart','London','London','UK',1,6000.00,8000.00,3000.00,11000.00,'GFSGERS','A003'),
('C00002','Bolt','New York','New York','USA',3,5000.00,7000.00,9000.00,3000.00,'DDNRDRH','A008'),
('C00018','Fleming','Brisban','Brisban','Australia',2,7000.00,7000.00,9000.00,5000.00,'NHBGVFC','A005
'),
('C00021','Jacks','Brisban','Brisban','Australia',1,7000.00,7000.00,7000.00,7000.00,'WERTGDF','A005'),
('C00019','Yearannaidu','Chennai','Chennai','India',1,8000.00,7000.00,7000.00,8000.00,'ZZZZBFV','A01
0');

```

```

INSERT INTO SALESMAN(SALESMAN_ID,NAME,CITY,COMMISSION)
VALUES
(5001,"James Hoog","New York",0.15),
(5002,"Nail Knite","Paris",0.13),
(5005,"Pit Alex","London",0.11),
(5006,"Mc Lyon","Paris",0.14),
(5007,"Paul Adam","Rome",0.13),
(5003,"Lauson Hen","San Jose",0.12);

```

```

INSERT INTO CUSTOMER(CUSTOMER_ID,CUST_NAME,CITY,GRADE,SALESMAN_ID)
VALUES
(3002,"Nick Rimando","New York",100,5001),
(3007,"Brad Davis","New York",200,5001),
(3005,"Graham Zusi","California",200,5002),
(3008,"Julian Green","London",300,5002),
(3004,"Fabian Johnson","Paris",300,5006),
(3009,"Geoff Cameron","Berlin",100,5003),
(3003,"Jozy Altidor","Moscow",200,5007),
(3001,"Brad Guzan","London",0,5005);

```

- 1)

```
UPDATE employee
SET email='not available'
WHERE email IS NOT NULL;
```
- 2)

```
UPDATE employee
SET email='not available', COMMISSION_PCT='0.10'
WHERE email IS NOT NULL;
```
- 3)

```
UPDATE employee
SET email='not available', COMMISSION_PCT='0.10'
WHERE DEPARTMENT_ID=110;
```
- 4)

```
UPDATE employee
SET email='not available'
WHERE department_id=80 AND COMMISSION_PCT<0.20;
```
- 5)

```
UPDATE employee
SET email='not available'
WHERE department_id=90;
```
- 6)

```
UPDATE employee
SET SALARY=8000.00
WHERE EMPLOYEE_ID=105 AND salary < 5000.00;
```
- 7)

```
SELECT first_name, last_name, department_id
FROM employee
WHERE Department_id=30 OR Department_id=100
ORDER BY department_id ASC;
```
- 8)

```
SELECT concat(first_name, last_name)
FROM employee
WHERE hire_date BETWEEN '1987-01-31' AND '1987-12-31';
```
- 9)

```
SELECT job_id
FROM Employee
ORDER BY job_id DESC;
```
- 10)

```
SELECT CONCAT(FIRST_NAME, LAST_NAME) AS name, salary, salary*15/100 AS PF
FROM Employee
ORDER BY CONCAT(first_name, last_name) ASC;
```
- 11)

```
SELECT last_name
FROM employee
WHERE last_name LIKE '__e%';
```
- 12)

```
SELECT cust_city, SUM(opening_amt),
AVG(receive_amt),
MAX(payment_amt)
FROM cust
WHERE grade=2 GROUP BY cust_city HAVING AVG(receive_amt) > 500.00 ORDER BY
SUM(opening_amt);
```


13)

```
SELECT cust_country,COUNT(cust_name)
FROM cust
GROUP BY GRADE HAVING COUNT(cust_name) > 2;
```

14)

```
SELECT customer.cust_name,customer.city,salesman.name,salesman.commission
FROM customer
INNER JOIN salesman ON customer.salesman_id=salesman.salesman_id;
```

15)

```
SELECT customer.cust_name, customer.city, salesman.name , salesman.commission
FROM customer
INNER JOIN salesman ON customer.salesman_id=salesman.salesman_id
WHERE salesman.commission>12;
```

16)

```
SELECT customer.cust_name,customer.city,salesman.name,salesman.city,salesman.commission
FROM customer
INNER JOIN salesman ON customer.salesman_id=salesman.salesman_id
WHERE salesman.commission > 12 AND customer.city<>salesman.city;
```

17)

```
SELECT customer.cust_name,customer.city,customer.grade,salesman.name ,salesman.city
FROM customer
INNER JOIN salesman ON customer.salesman_id=salesman.salesman_id
ORDER BY customer.customer_id ASC;
```

18)

```
SELECT customer.cust_name,customer.city ,customer.grade,salesman.name ,salesman.city
FROM customer
INNER JOIN salesman ON customer.salesman_id=salesman.salesman_id
WHERE customer.grade < 300
ORDER BY customer.customer_id ASC;
```

19)

```
SELECT customer.cust_name,customer.city,customer.grade, salesman.name , salesman.city
FROM customer
RIGHT OUTER JOIN salesman ON customer.salesman_id=salesman.salesman_id
ORDER BY salesman.salesman_id;
```

20)

```
SELECT customer.cust_name,customer.city,customer.grade, salesman.name , salesman.city
FROM customer
LEFT OUTER JOIN salesman ON salesman.salesman_id=customer.salesman_id
WHERE customer.grade < 300
ORDER BY salesman.salesman_id ASC;
```