PROBLEM STATEMENT:

Create the following table:

Student

Field Name	Data type	size
Roll_number	Number	10
Student_name	Varchar2	20
Father_name	Varchar2	20
Address	Varchar2	30
Dob	Date	
Phone_number	Number	15
Course	Varchar2	10

QUERY:

```
CREATE TABLE Student (
  Roll_number NUMBER(10),
  Student_name VARCHAR2(20),
  Father_name VARCHAR2(20),
  Address VARCHAR2(30),
  Dob DATE,
  Phone_number NUMBER(15),
  Course VARCHAR2(10)
);
```

```
Table created.
```

PROBLEM STATEMENT:

Insert the following data in the Student table:

Roll_number	Student_name	Father_name	Address	Dob	Phone_number	Coures
101	Ankit	Samir	Dehradun	1-mar-97	9898772212	MCA
102	Sam	Jatin	Delhi	7-apr-99	2222290909	MScIT
103	Megha	Mayank		5-may-99	4433309099	MCA
104	Deepak	Dhiren	Meerut	10-aug-99	2234455644	BTech
105	Ashish	Viraj	Dehradun		1234566789	MCA

QUERY:

```
1 v INSERT INTO Student (Roll_number, Student_name, Father_name, Address, Dob, Phone_number, Course)
2       VALUES (101, 'Ankit', 'Samir', 'Dehradun', '01-MAR-1997', 9898772212, 'MCA');
3 v INSERT INTO Student (Roll_number, Student_name, Father_name, Address, Dob, Phone_number, Course)
4       VALUES (102, 'Sam', 'Jatin', 'Delhi', '07-APR-1999', 2222290909, 'MScIT');
5 v INSERT INTO Student (Roll_number, Student_name, Father_name, Address, Dob, Phone_number, Course)
6       VALUES (103, 'Megha', 'Mayank', null, '05-MAY-1999', 4433309099, 'MCA');
7 v INSERT INTO Student (Roll_number, Student_name, Father_name, Address, Dob, Phone_number, Course)
8       VALUES (104, 'Deepak', 'Dhiren', 'Meerut', '10-AUG-1999', 2234455644, 'BTech');
9 v INSERT INTO Student (Roll_number, Student_name, Father_name, Address, Dob, Phone_number, Course)
10      VALUES (105, 'Ashish', 'Viraj', 'Dehradun', null, 1234566789, 'MCA');
```

```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```

PROBLEM STATEMENT:

Perform the following queries:

1. Describe the structure of the student table.

QUERY:

```
1  DESCRIBE Student;
2
```

TABLE STUDENT

Column	Null?	Type
ROLL_NUMBER	-	NUMBER(10,0)
STUDENT_NAME	-	VARCHAR2(20)
FATHER_NAME	-	VARCHAR2(20)
ADDRESS	-	VARCHAR2(30)
DOB	-	DATE
PHONE_NUMBER	-	NUMBER(15,0)
COURSE	-	VARCHAR2(10)

Download CSV

7 rows selected.

2. Retrieve the content of the student table.

QUERY:

```
1  SELECT * FROM Student;
2
```

ROLL_NUMBER	STUDENT_NAME	FATHER_NAME	ADDRESS	DOB	PHONE_NUMBER	COURSE
101	Ankit	Samir	Dehradun	01-MAR-97	9898772212	MCA
102	Sam	Jatin	Delhi	07-APR-99	2222290909	MScIT
103	Megha	Mayank	-	05-MAY-99	4433309099	MCA
104	Deepak	Dhiren	Meerut	10-AUG-99	2234455644	BTech
105	Ashish	Viraj	Dehradun	-	1234566789	MCA

3. Retrieve only the roll_number, student_name from the student table.

QUERY:

```
1  SELECT Roll_number, Student_name FROM Student;
2
```

ROLL_NUMBER	STUDENT_NAME
101	Ankit
102	Sam
103	Megha
104	Deepak
105	Ashish

4. Display data of student members who have roll number 101 or 104.

QUERY:

```
1  SELECT * FROM Student WHERE Roll_number IN (101, 104);
2
```

ROLL_NUMBER	STUDENT_NAME	FATHER_NAME	ADDRESS	DOB	PHONE_NUMBER	COURSE
101	Ankit	Samir	Dehradun	01-MAR-97	9898772212	MCA
104	Deepak	Dhiren	Meerut	10-AUG-99	2234455644	BTech

5. Display all details of MCA members only.

QUERY:

```
SELECT * FROM Student WHERE Course = 'MCA';
```

ROLL_NUMBER	STUDENT_NAME	FATHER_NAME	ADDRESS	DOB	PHONE_NUMBER	COURSE
101	Ankit	Samir	Dehradun	01-MAR-97	9898772212	MCA
103	Megha	Mayank	-	05-MAY-99	4433309099	MCA
105	Ashish	Viraj	Dehradun	-	1234566789	MCA

6. Display data of students alphabetical order.

QUERY:

```
SELECT * FROM Student ORDER BY Student_name;
```

ROLL_NUMBER	STUDENT_NAME	FATHER_NAME	ADDRESS	DOB	PHONE_NUMBER	COURSE
101	Ankit	Samir	Dehradun	01-MAR-97	9898772212	MCA
105	Ashish	Viraj	Dehradun	-	1234566789	MCA
104	Deepak	Dhiren	Meerut	10-AUG-99	2234455644	BTech
103	Megha	Mayank	-	05-MAY-99	4433309099	MCA
102	Sam	Jatin	Delhi	07-APR-99	2222290909	MScIT

7. Display the student who live in Dehradun.

QUERY:

```
SELECT * FROM Student WHERE Address = 'Dehradun';
```

ROLL_NUMBER	STUDENT_NAME	FATHER_NAME	ADDRESS	DOB	PHONE_NUMBER	COURSE
101	Ankit	Samir	Dehradun	01-MAR-97	9898772212	MCA
105	Ashish	Viraj	Dehradun	-	1234566789	MCA

8. Display the data of student who have rollno 105 and studied in MCA course.

QUERY:

```
SELECT * FROM Student WHERE Roll_number = 105 AND Course = 'MCA';
```

ROLL_NUMBER	STUDENT_NAME	FATHER_NAME	ADDRESS	DOB	PHONE_NUMBER	COURSE
105	Ashish	Viraj	Dehradun	-	1234566789	MCA

9. Display the Rollno, name & father name concatenated with the column heading Student Information.

QUERY:

```
SELECT CONCAT(CONCAT(CONCAT(CONCAT(Roll_number, ' '), Student_name), ' '), Father_name) AS "Student Information"
FROM Student;
```

Student Information
101 Ankit Samir
102 Sam Jatin
103 Megha Mayank
104 Deepak Dhiren
105 Ashish Viraj

10. Retrieve the current date (sysdate).

QUERY:

```
SELECT sysdate FROM dual;
```

SYSDATE
05-APR-23

11. Retrieve the list of all table in your user (tab).

QUERY:

```
1  select table_name from user_tables;
```

TABLE_NAME
IDK
STUDENT
TEST
TEST1

PROBLEM STATEMENT:

Create the following table:

Salesmen

Field Name	Data_type	size
Snum	Number	10
Sname	varchar2	20
City	Varchar2	20
Commission	Number	7,3

QUERY:

```
CREATE TABLE Salesmen (
  Snum NUMBER(10),
  Sname VARCHAR2(20),
  City VARCHAR2(20),
  Commission NUMBER(7,3)
);
```

```
Table created.
```

Insert the following data in the table Salesmen

SNUM	SNAME	CITY	COMMISSION
1001	Piyush	London	12
1002	Sejal	Surat	13
1004	Miti	London	11
1007	Rajesh	Baroda	15
1003	Anand	New Delhi	10

QUERY:

```
INSERT INTO Salesmen (Snum, Sname, City, Commission) VALUES (1001, 'Piyush', 'London', 12);
INSERT INTO Salesmen (Snum, Sname, City, Commission) VALUES (1002, 'Sejal', 'Surat', 13);
INSERT INTO Salesmen (Snum, Sname, City, Commission) VALUES (1004, 'Miti', 'London', 11);
INSERT INTO Salesmen (Snum, Sname, City, Commission) VALUES (1007, 'Rajesh', 'Baroda', 15);
INSERT INTO Salesmen (Snum, Sname, City, Commission) VALUES (1003, 'Anand', 'New Delhi', 10);
```

```
1 row(s) inserted.
```

PROBLEM STATEMENT:

Create the following table

Customer

Field name	Data type	size
Cnum	Number	7
Cname	Varchar2	20
City	Varchar2	30
Rating	Number	5
Snum	Number	10

QUERY:

```
CREATE TABLE Customer (
  Cnum NUMBER(7),
  Cname VARCHAR2(20),
  City VARCHAR2(30),
  Rating NUMBER(5),
  Snum NUMBER(10)
);
```

```
Table created.
```

PROBLEM STATEMENT:

Insert the following data in table Customer

CNUM	CNAME	CITY	RATING	SNUM
2001	Harsh	London	100	1001
2002	Gita	Rome	200	1003
2003	Lalit	Surat	200	1002
2004	Govind	Bombay	300	1002
2006	Chirag	London	100	1001
2008	Chinmay	Surat	300	1007
2007	Pratik	Rome	100	1004

QUERY:

```
INSERT INTO Customer (Cnum, Cname, City, Rating, Snum) VALUES (2001, 'Harsh', 'London', 100, 1001);
INSERT INTO Customer (Cnum, Cname, City, Rating, Snum) VALUES (2002, 'Gita', 'Rome', 200, 1003);
INSERT INTO Customer (Cnum, Cname, City, Rating, Snum) VALUES (2003, 'Lalit', 'Surat', 200, 1002);
INSERT INTO Customer (Cnum, Cname, City, Rating, Snum) VALUES (2004, 'Govind', 'Bombay', 300, 1002);
INSERT INTO Customer (Cnum, Cname, City, Rating, Snum) VALUES (2006, 'Chirag', 'London', 100, 1001);
INSERT INTO Customer (Cnum, Cname, City, Rating, Snum) VALUES (2008, 'Chinmay', 'Surat', 300, 1007);
INSERT INTO Customer (Cnum, Cname, City, Rating, Snum) VALUES (2007, 'Pratik', 'Rome', 100, 1004);
```

```
1 row(s) inserted.
```

PROBLEM STATEMENT:

Create the following table

Orders

Field Name	Data type	Size
Onum	Number	10
Amount	Number	10,3
Odate	date	
Cnum	Number	10
Snum	Number	10

QUERY:

```
CREATE TABLE Orders (
  Onum NUMBER(10),
  Amount NUMBER(10,3),
  Odate DATE,
  Cnum NUMBER(10),
  Snum NUMBER(10)
);
```

```
Table created.
```

Insert the following data in table Orders

ONUM	AMOUNT	ODATE	CNUM	SNUM
3001	18.69	10/03/97	2008	1007
3003	767.19	10/03/97	2001	1001
3002	1900.10	10/03/97	2007	1004
3005	5160.45	10/03/97	2003	1002
3006	1098.16	10/03/97	2008	1007
3009	1713.23	10/04/97	2002	1003
3007	75.75	10/04/97	2004	1002

QUERY:

```
1 INSERT INTO Orders (Onum, Amount, Odate, Cnum, Snum) VALUES (3001, 18.69, '10-Mar-97', 2008, 1007);
2 INSERT INTO Orders (Onum, Amount, Odate, Cnum, Snum) VALUES (3003, 767.19, '10-Mar-97', 2001, 1001);
3 INSERT INTO Orders (Onum, Amount, Odate, Cnum, Snum) VALUES (3002, 1900.10, '10-Mar-97', 2007, 1004);
4 INSERT INTO Orders (Onum, Amount, Odate, Cnum, Snum) VALUES (3005, 5160.45, '10-Mar-97', 2003, 1002);
5 INSERT INTO Orders (Onum, Amount, Odate, Cnum, Snum) VALUES (3006, 1098.16, '10-Mar-97', 2008, 1007);
6 INSERT INTO Orders (Onum, Amount, Odate, Cnum, Snum) VALUES (3009, 1713.23, '10-Apr-97', 2002, 1003);
7 INSERT INTO Orders (Onum, Amount, Odate, Cnum, Snum) VALUES (3007, 75.75, '10-Apr-97', 2004, 1002);
```

```
1 row(s) inserted.
```

PROBLEM STATEMENT:

Answer the following queries:

1. Produce the order no, amount and date of all orders.

QUERY:

```
SELECT Onum, Amount, Odate FROM Orders;
```

ONUM	AMOUNT	ODATE
3001	18.69	10-MAR-97
3003	767.19	10-MAR-97
3002	1900.1	10-MAR-97
3005	5160.45	10-MAR-97
3006	1098.16	10-MAR-97
3009	1713.23	10-APR-97
3007	75.75	10-APR-97

2. Give all the information about all the customers with salesman number 1001.

QUERY:

```
SELECT * FROM Customer WHERE Snum = 1001;
```

CNUM	CNAME	CITY	RATING	SNUM
2001	Harsh	London	100	1001
2006	Chirag	London	100	1001

3. Display the following information in the order of city, sname, snum and commission.

QUERY:

```
SELECT City, Sname, Snum, Commission FROM Salesmen ORDER BY City, Sname, Snum, Commission;
```

CITY	SNAME	SNUM	COMMISSION
Baroda	Rajesh	1007	15
London	Miti	1004	11
London	Piyush	1001	12
New Delhi	Anand	1003	10
Surat	Sejal	1002	13

4. List of rating followed by the name of each customer in Surat.

QUERY:

```
SELECT Rating, Cname FROM Customer WHERE City = 'Surat';
```

RATING	CNAME
200	Lalit
300	Chinmay

5. List of all orders for more than Rs. 1000.

QUERY:

```
1  SELECT * FROM Orders WHERE Amount > 1000;
2
```

ONUM	AMOUNT	ODATE	CNUM	SNUM
3002	1900.1	10-MAR-97	2007	1004
3005	5160.45	10-MAR-97	2003	1002
3006	1098.16	10-MAR-97	2008	1007
3009	1713.23	10-APR-97	2002	1003

6. List of snum of all salesmen with orders in order table without any duplicates.

QUERY:

```
1  SELECT DISTINCT Snum FROM Orders;
2
```

SNUM
1007
1004
1001
1002
1003

7. List of names and cities of all salesmen in London with commission above 10%.

QUERY:

```
SELECT Sname, City FROM Salesmen WHERE City = 'London' AND Commission > 10;
```

SNAME	CITY
Piyush	London
Miti	London

8. List all customers excluding those with rating <=100 unless they are located in Rome.

QUERY:

```
SELECT * FROM Customer WHERE Rating > 100 OR City = 'Rome';
```

CNUM	CNAME	CITY	RATING	SNUM
2002	Gita	Rome	200	1003
2003	Lalit	Surat	200	1002
2004	Govind	Bombay	300	1002
2008	Chinmay	Surat	300	1007
2007	Pratik	Rome	100	1004

9. List all orders for more than Rs.1000 except the orders of snum<1006 of 10/03/97.

QUERY:

```
1  SELECT * FROM Orders WHERE Amount > 1000 AND NOT (Snum < 1006 AND Odate = '10-MAR-97');
2
```

ONUM	AMOUNT	ODATE	CNUM	SNUM
3006	1098.16	10-MAR-97	2008	1007
3009	1713.23	10-APR-97	2002	1003

10. List all orders taken on March 3rd or 4th or 10th, 1997.

QUERY:

```
1  SELECT * FROM Orders WHERE Odate IN ('03-MAR-97', '04-MAR-97', '10-MAR-97');
2
```

ONUM	AMOUNT	ODATE	CNUM	SNUM
3001	18.69	10-MAR-97	2008	1007
3003	767.19	10-MAR-97	2001	1001
3002	1900.1	10-MAR-97	2007	1004
3005	5160.45	10-MAR-97	2003	1002
3006	1098.16	10-MAR-97	2008	1007

11. If the given rating is monthly, calculate the annual rating of all customers.

QUERY:

```
SELECT CNUM, CNAME, CITY, RATING*12 AS ANNUAL_RATING FROM CUSTOMER;
```

CNUM	CNAME	CITY	ANNUAL_RATING
2001	Harsh	London	1200
2002	Gita	Rome	2400
2003	Lalit	Surat	2400
2004	Govind	Bombay	3600
2006	Chirag	London	1200
2008	Chinmay	Surat	3600
2007	Pratik	Rome	1200

12. Display the cname and city together with the alias name of the column as customer information.

QUERY:

```
SELECT cname || ', ' || city AS "Customer Information" FROM customer;
```

Customer Information
Harsh, London
Gita, Rome
Lalit, Surat
Govind, Bombay
Chirag, London
Chinmay, Surat
Pratik, Rome

13. Display the supplier name ‘belongs to’ city with the column heading supplier information.

QUERY:

```
1  SELECT sname || ' belongs to ' || city AS "Supplier Information" FROM salesmen;
2
```

Supplier Information
Piyush belongs to London
Sejal belongs to Surat
Miti belongs to London
Rajesh belongs to Baroda
Anand belongs to New Delhi

14. Display the information of all orders in ascending order of amount of the order.

QUERY:

```
1  SELECT * FROM orders ORDER BY amount ASC;
2
```

ONUM	AMOUNT	ODATE	CNUM	SNUM
3001	18.69	10-MAR-97	2008	1007
3007	75.75	10-APR-97	2004	1002
3003	767.19	10-MAR-97	2001	1001
3006	1098.16	10-MAR-97	2008	1007
3009	1713.23	10-APR-97	2002	1003
3002	1900.1	10-MAR-97	2007	1004
3005	5160.45	10-MAR-97	2003	1002

15. Display the information of all the customers with the cnum greater than equal to 2002 and less than equal to 2008.

QUERY:

```
SELECT * FROM Customer WHERE Cnum >= 2002 AND Cnum <= 2008;
```

CNUM	CNAME	CITY	RATING	SNUM
2002	Gita	Rome	200	1003
2003	Lalit	Surat	200	1002
2004	Govind	Bombay	300	1002
2006	Chirag	London	100	1001
2008	Chinmay	Surat	300	1007
2007	Pratik	Rome	100	1004

16. Display the information of all supplier who belongs either to London, Surat or New Delhi.

QUERY:

```
SELECT * FROM Salesmen WHERE City IN ('London', 'Surat', 'New Delhi');
```

SNUM	SNAME	CITY	COMMISSION
1001	Piyush	London	12
1002	Sejal	Surat	13
1004	Miti	London	11
1003	Anand	New Delhi	10

17. Display the name of all customers whose name starts with C .

QUERY:

```
1  SELECT * FROM Customer WHERE Cname LIKE 'C%';
2
```

CNUM	CNAME	CITY	RATING	SNUM
2006	Chirag	London	100	1001
2008	Chinmay	Surat	300	1007

18. List all customers whose names ends with a letter ‘d'.

QUERY:

```
1  SELECT * FROM Customer WHERE Cname LIKE '%d';
2
```

CNUM	CNAME	CITY	RATING	SNUM
2004	Govind	Bombay	300	1002

19. List all customers whose names begins with letter 'A' or 'G'.

QUERY:

```
SELECT * FROM Customer WHERE Cname LIKE 'A%' OR Cname LIKE 'G%';
```

CNUM	CNAME	CITY	RATING	SNUM
2002	Gita	Rome	200	1003
2004	Govind	Bombay	300	1002

20. List all orders with NULL amount.

QUERY:

```
SELECT * FROM Orders WHERE Amount IS NULL;
```

no data found

21. List all the salesman whose name include letter ‘a’ in their name.

QUERY:

```
SELECT * FROM Salesmen WHERE Sname LIKE '%a%';
```

SNUM	SNAME	CITY	COMMISSION
1002	Sejal	Surat	13
1007	Rajesh	Baroda	15
1003	Anand	New Delhi	10

PROBLEM STATEMENT:

Create a “Course” table with following constraints:

All constraints to be given ONLY at column level

Field Name	Data type	Constraints
Course Code	Number	Primary Key
Course Name	varchar2	Not Null
Course Fees	number	Default value 60000
Course semester	Number	>=1
Dept	Varchar2	Not null

QUERY:

```
CREATE TABLE Course (
  Course_Code NUMBER PRIMARY KEY,
  Course_Name VARCHAR2(255) NOT NULL,
  Course_Fees NUMBER DEFAULT 60000,
  Course_Semester NUMBER CHECK (Course_Semester >= 1),
  Dept VARCHAR2(255) NOT NULL
);
```

```
Table created.
```

Insert the following Data

COURSECODE	COURSENAME	COURSEFEES	COURSESEMESTER	DEPT
101	MCA	80000	6	MCA
102	MBA	50000	4	MGMT
103	Btech	45000	8	ENGG
104	BCA	30000	6	MCA
105	BSCIT	25000	6	ALLIED
106	MSCIT	35000	6	ALLIED
107	BBA	35000	6	MGMT
108	OCP	3000	2	MCA

QUERY:

```
1  INSERT INTO Course VALUES (101, 'MCA', 80000, 6, 'MCA');
2  INSERT INTO Course VALUES (102, 'MBA', 50000, 4, 'MGMT');
3  INSERT INTO Course VALUES (103, 'Btech', 45000, 8, 'ENGG');
4  INSERT INTO Course VALUES (104, 'BCA', 30000, 6, 'MCA');
5  INSERT INTO Course VALUES (105, 'BSCIT', 25000, 6, 'ALLIED');
6  INSERT INTO Course VALUES (106, 'MSCIT', 35000, 6, 'ALLIED');
7  INSERT INTO Course VALUES (107, 'BBA', 35000, 6, 'MGMT');
8  INSERT INTO Course VALUES (108, 'OCP', 3000, 2, 'MCA');
```

```
1 row(s) inserted.
```

PROBLEM STATEMENT:

Create a “Student” table with following constraints

Field name	Data types	Contraints
Roll No	Number	Primary key
Name	Varchar2	Not Null
DOB	date	
City	Varchar2	Default ‘Dehradun’

QUERY:

```
CREATE TABLE Student (
    RollNo NUMBER PRIMARY KEY,
    Name VARCHAR2(50) NOT NULL,
    DOB DATE,
    City VARCHAR2(50) DEFAULT 'Dehradun'
);
```

```
Table created.
```

Insert the following data

Roll no	Name	DOB	City
1	Amit	1-Jan-77	Bombay
2	Rohit	11-Sep-78	Dehradun
3	Shweta	21-Feb-81	Dehradun
4	Puneet	5-Aug-72	Goa
5	Shashwat	7-Aug-70	Haridwar

QUERY:

```
INSERT INTO Student VALUES (1, 'Amit', '1-Jan-77', 'Bombay');
INSERT INTO Student VALUES (2, 'Rohit', '11-Sep-78', 'Dehradun');
INSERT INTO Student VALUES (3, 'Shweta', '21-Feb-81', 'Dehradun');
INSERT INTO Student VALUES (4, 'Puneet', '5-Aug-72', 'Goa');
INSERT INTO Student VALUES (5, 'Shashwat', '7-Aug-70', 'Haridwar');
```

```
1 row(s) inserted.
```

PROBLEM STATEMENT:

Create the table ‘Register’ with following constraint

Field Name	Data type	constraints
Roll no	Number	Foreign key (student table)
Cousre code	Number	Foreign key (course table)

QUERY:

```
CREATE TABLE Register (
    Roll_no NUMBER,
    Course_Code NUMBER,
    FOREIGN KEY (Roll_no) REFERENCES Student (RollNo),
    FOREIGN KEY (Course_Code) REFERENCES Course (Course_Code)
);
```

```
Table created.
```

Insert the Data

QUERY:

```
INSERT INTO Register VALUES (4, 103);
INSERT INTO Register VALUES (3, 101);
INSERT INTO Register VALUES (2, 101);
INSERT INTO Register VALUES (9, 222);
```

```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

ORA-02291: integrity constraint (SQL_ENENAVNYEQHOMUWGQOBYTWJUE.SYS_C00118663553) violated - parent key not
found ORA-06512: at "SYS.DBMS_SQL", line 1721
```

1. See the contents of “User_Constraints” table and note the constraint number and type of constraints for your all above created tables.

QUERY:

```
1  SELECT * FROM user_constraints;
2
```

OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SEARCH_CONDITION	SEARCH_CONDITION_VC	R_OWNER	R_CONSTRAINT_NAME	DELETE_RULE
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663553	R	REGISTER	-	-	SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663549	NO ACTION
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663552	R	REGISTER	-	-	SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663551	NO ACTION
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663546	C	COURSE	"COURSE_NAME" IS NOT NULL	"COURSE_NAME" IS NOT NULL	-	-	-
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663547	C	COURSE	"DEPT" IS NOT NULL	"DEPT" IS NOT NULL	-	-	-
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663548	C	COURSE	Course_Semester >= 1	Course_Semester >= 1	-	-	-
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663550	C	STUDENT	"NAME" IS NOT NULL	"NAME" IS NOT NULL	-	-	-
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663549	P	COURSE	-	-	-	-	-
SQL_ENENAVNYEQHOMUWGQOBYTWJUE	SYS_C00118663551	P	STUDENT	-	-	-	-	-

Case study 1:

Student is enrolled in a course. Each student is identified by his roll number. Other attributes of student are name, Dob, and semester. Each course has a unique course number. Other attributes of course are course name and number of students. Students are taught by faculty and faculties are working in course. Each faculty have a unique faculty number. Other attributes are name, course and salary. Draw an ERD and create the database for this scenario. Following constraint must be considered.

1. Student's roll number should be unique and can not be left blank.
2. Student name cannot be left blank.
3. Course number should be unique and cannot be left blank.
4. Any column of course table cannot be left blank.
5. Course can only be 'BCA','MCA','M.SC IT'
6. Faculty number should be unique and cannot be left blank.
7. Salary of faculty can not be a negative number.
8. You can assume other attributes of your choice.

Based on the above tables solve the following queries:

1. Retrieve the information of those students who are taught by faculty f101.
2. Retrieve record of faculty whose faculty number =f104.
3. Display the information of the students whose name ends with 's'.