

Assignment - 4

* Create following tables using primary and foreign key

→ Students (rollno, sname, date_of_birth, gender, city, cid)

→ CREATE TABLE Student (

rollno NUMBER PRIMARY KEY,

sname VARCHAR2(50),

date_of_birth DATE,

gender CHAR(1),

city VARCHAR2(50)

cid NUMBER,

CONSTRAINT fk_class FOREIGN KEY

(cid) REFERENCES Class(cid)

);

2. MARKS (rollno, sub1, sub2, sub3)

→ CREATE TABLE MARKS (

rollno NUMBER,

sub1 NUMBER,

sub2 NUMBER,

sub3 NUMBER,

CONSTRAINT pkmarks PRIMARY KEY

(rollno),

CONSTRAINT fk_student FOREIGN KEY

(rollno) REFERENCES Student

(rollno)

);

3. Class (cid, cname)

→ CREATE TABLE Class
cid Number PRIMARY KEY,
cname VARCHAR2(50),
';

* Queries

* Inserting Records in Class table

→ Insert Into Class (cid, cname)
VALUES (1, 'FYBCA'),
(2, 'SYBCA'),
(3, 'TYBCA');

→ In Student table

→ Insert INTO Student (rollno, sname, date_of_birth,
gender, city, cid)

VALUES (110, 'RAJ', TO_DATE('15-JUL-2001', 'DD-MON-YYYY'), 'M',
'Ahmedabad', 1),
(120, 'Mituli', TO_DATE('08-MAR-2002', 'DD-MON-YYYY'), 'F',
'Surat', 2),
(130, 'Nishu', TO_DATE('22-JAN-2002', 'DD-MON-YYYY'), 'F',
'Bharuch', 2),
(140, 'Mehul', TO_DATE('19-JAN-2000', 'DD-MON-YYYY'), 'M',
'Vadodara', 3),
(150, 'Priyul', TO_DATE('05-DEC-2002', 'DD-MON-YYYY'), 'F',
'Nasum', 2);

→ Inserting Marks

→ INSERT INTO Marks (rollno, sub1, sub2, sub3)
VALUES (110, 85, 78, 92),
(120, 88, 91, 78),
(130, 76, 85, 88),
(140, 65, 72, 70),
(150, 90, 87, 94);

* Queries

1. Add Fields named "Total" and "Per" in the Marks table

→ ALTER TABLE Marks

ADD (Total NUMBER, Per NUMBER);

2. UPDATE the Total Field

→ UPDATE MARKS

SET Total = sub1 + sub2 + sub3;

3. Update Per Field

→ UPDATE MARKS

SET Per = ROUND((sub1 + sub2 + sub3)/3, 2);

4. Display the student's personal detail with class name

→ SELECT s.rollno, s.name, s.date_of_birth, s.gender,
s.city, c.name
FROM Student s
JOIN Class - c ON s.cid = c.cid;

rollno	sname	date of birth	Gender	City	course
110	Raj Patel	25-JUL-2002	M	Ahmedabad	FYBCA
120	Mitali Shah	08-MAR-2002	F	Surat	SYBCA
130	Nisha Mehta	22-JAN-2002	F	Bharuch	FYBCA
140	Mehul Joshi	29-JUN-2000	M	Vadodara	TYBCA
150	Priyanka Desai	05-DEC-2002	F	Navsari	SYBCA

5. Display students result with their name
→ SELECT

- student.sname,

Marks.sub1,

Marks.sub2,

Marks.sub3,

Marks.Total,

Marks.Per

FROM student, marks

Student

JOIN

Marks

ON

student.rollno = Marks.rollno;

Output:

sname	sub1	sub2	sub3	Total	Per
Raj Patel	85	78	92	255	85.00
Mitali Shah	88	91	79	258	86.00
Nisha Mehta	76	85	88	249	83.00
Mehul Joshi	65	72	70	207	69.00
Priyanka Desai	90	87	94	271	90.33

6. Display the students detail with results
whose birth is in the year 2002.

→ SELECT

Student.rollno,
Student.sname,
Student.date_of_birth,
Student.gender,
Student.city,
Marks.Total,
Marks.Per
From student
JOIN Marks
ON Student.rollno = Marks.rollno
WHERE EXTRACT(YEAR FROM Student.date_of_birth) = 2002;

rollno	sname	date_of_birth	gender	city	Total	Per
110	Roy Per	15-JUL-2002	M	Ahmedabad	255	85
130	Nishu	22-JAN-2002	F	Bharuch	249	83

7. Display male students results

→ SELECT

Student.rollno,
Student.sname,
Student.gender,
Marks.sub1,
Marks.sub2,
Marks.sub3,
Marks.Total,

Marks_Per
 FROM Student
 JOIN Marks
 ON Student.rollno = Marks.rollno
 WHERE Student.gender = 'M';

rollno	sname	gender	sub1	sub2	sub3	Total	Per%
110	Raj	M	85	78	92	255	85
140	Mehrel	M	65	72	70	207	69

8. Display the students personnel details who belong to the class "FYBCA".

→ SELECT Student.rollno,
 Student.sname,
 Student.date_of_birth,
 Student.gender,
 Student.city,
 Class cname
 FROM Student
 JOIN Class
 ON Student.cid = Class.cid
 WHERE Class cname = 'FYBCA';

rollno	sname	date_of_birth	gender	city	cname
110	Raj	15-JUL-2001	M	Ahmedab.	FYBCA
190	Mitali	10-MAR-2009	F	Surat	FYBCA

9. Display the result of students, who belong to the class "SYBCA".

→ SELECT Student.rollno,
Student.sname,
Student.dateofbirth,
Student.gender,
Student.city,
Marks.Total,
Marks.Per
FROM Student
JOIN MARKS
ON Student.rollno = Marks.rollno
JOIN Class
ON Student.cid = Class.cid
WHERE Class.cname = 'SYBCA';

rollno	sname	dateofbirth	gender	city	Total	Per
120	Mitali	08-MAR-2002	F	Surat	255	86
150	Priyu	05-DEC-2009	F	Mausam	271	90.33

10. Display class name and total number of students available in each class.

→ SELECT Class cname,
COUNT(Student.rollno) AS total students
FROM Class
LEFT JOIN Student
ON Class.cid = Student.cid
GROUP BY Class cname;

cname	total students
FYBCA	2
SYBCA	9

11. Display the students' details in descending order with class name.

→ SELECT Student.rollno,
Student.sname,
Student.date_of_birth,
Student.gender,
Student.city,
Class.cname
FROM Student
JOIN Class
ON Student.cid = Class.cid
ORDER BY student.sname DESC;

rollno	sname	date_of_birth	gender	city	cname
140	Mehul	25-JUN-2001	M	Vadodara	FYBCA
120	Mitali	20-MAR-2002	F	Surat	FYBCF
110	Raj	25-JUL-2002	M	Ahmedabad	SYBCA
130	Nisha	22-JAN-2002	F	Bharuch	SYBCA
150	Priya	05-DEC-2002	F	Navsari	FYBCI

12. Display the students detail who got distinction

→ SELECT Student.rollno,
Student.sname,
Student.date_of_birth,
Student.gender,
Student.city,
Marks.Total,
Marks.Per
FROM Student
JOIN Marks
ON Student.rollno = Marks.rollno
WHERE Marks.Per >= 75;

rollno	sname	date of birth	gender	city	Total	Per
110	Raj	15-JUL-2001	M	Ahmedabad	255	85
120	Mitali	10-MAR-2002	F	Surat	258	86
130	Priya	05-DEC-2002	F	Naswan	271	90.33

13. Display the students results who belong to Surat.

→ SELECT Student.rollno,
 Student.sname
 Student.gender,
 Marks.sub1,
 Marks.sub2,
 Marks.sub3,
 Marks.Total,
 Marks.Per

FROM Student

JOIN Marks

ON Student.rollno = Marks.rollno

WHERE student.city = 'surat';

rollno	sname	gender	sub1	sub2	sub3	Total	Per
120	Mitali	F	85	88	85	258	86
130	Nisha	F	79	85	82	246	82

14. Display Female Students results who belong to Bharuch city.

→ SELECT Student.rollno,
 Student.sname,
 Student.gender,
 Marks.sub1,
 Marks.sub2,
 Marks.sub3,
 Marks.Total,

Marks_Per
 FROM Student
 JOIN Marks
 ON Student.rollno = Marks.rollno
 WHERE Student.city = 'Bharuch' AND
 Student.gender = 'F';

rollno	sname	gender	sub1	sub2	sub3	Total	Per
130	Nisha	F	79	85	82	246	82

Q5. Display the Navsari's student's results whose name start with "M".

→ SELECT Student.rollno,
 Student.sname,
 Student.gender,
 Marks.sub1,
 Marks.sub2,
 Marks.sub3,
 Marks.Total,
 Marks.Per
 FROM Student
 JOIN Marks
 ON Student.rollno = Marks.rollno
 WHERE Student.city = 'Navsari'
 AND Student.sname LIKE 'M%';

rollno	sname	gender	sub1	sub2	sub3	Total	Per
150	Mitali	F	85	90	85	260	86.67

16. List the students' details, their results, and class name.

```
→ SELECT Student.rollno,
        Student.sname,
        Student.date_of_birth,
        Student.gender,
        Student.city,
        Marks.sub1,
        Marks.sub2,
        Marks.sub3,
        Marks.Total,
        Marks.Per,
        Class.cname
    FROM
        student
    JOIN
        Marks
    ON Student.rollno = Marks.rollno
    JOIN
        Class
    ON Student.cid = Class.cid;
```

rollno	sname	date_of_birth	gender	city
110	Raj	15 JUL 2002	M	Ahmedabad
120	Mituli	20 - MAR - 2002	F	Surat
130	Mishu	22 - JAN - 2002	F	Bharuch
140	Mehul	25 - JUN - 2002	M	Vadodara
150	Priya	05 - DEC - 2002	F	Mumbai

sub1	sub2	sub3	Total	Per%	classname
83	78	92	255	85.	FYBCA
88	88	85	258	86	FYBCA
79	85	82	246	82	SYBCA
70	75	80	225	75	SYBCA
90	95	85	271	90.33	FYBCA

17. Display the maximum percentage achieved class-wise with class name.

→ SELECT

```

class.cname,
MAX(Marks.Per) AS max-percentage
FROM
class
JOIN
student
ON Class.cid = student.cid
JOIN Marks
ON student.rollno = Marks.rollno
GROUP BY class.cname;

```

classname	max-percentage
FYBCA	90.33
SYBCA	89

18. Display the class detail who doesn't have any student

→ SELECT Class.cname

FROM Class

LEFT JOIN Student

ON Class.cid = Student.cid

WHERE Student.rollno IS NULL;

Empty because no classes without students

19. Display the student's personal detail whose results are not available

→ SELECT

Student.rollno,

Student.sname,

Student.date_of_birth,

Student.gender,

Student.city,

FROM

Student (CourseProgram)

LEFT JOIN

Marks

ON

Student.rollno = Marks.rollno

WHERE

Marks.rollno IS NULL;

rollno	sname	date_of_birth	gender	city
140	Mehru	25-JUN-2003	M	Vadodara

90. Display the student's detail who belong to Surat city and who were born in the month of July.

→ SELECT

Student.rolling

Student.sname,

Student.date_of_birth,

Student.gender,

Student.city,

Marks.Total,

Marks.Per

FROM

Student

JOIN

Marks

ON

Student.rolling = Marks.rolling

WHERE

Student.city = 'Surat'

AND

EXTRACT(MONTH FROM Student.date_of_birth) = 7 ;

rolling	sname	date_of_birth	gender	city	Total	Per
220	Mitch	10-				
110	Raj	15-JUL-2007	M	Surat	255	65