Oracle Examples in Module 5

Lesson 1

1.

SELECT Offering.OfferNo,

COUNT(\*) AS NumStudents

FROM Enrollment, Offering

WHERE Offering.OfferNo = Enrollment.OfferNo

AND OffYear = 2013

GROUP BY Offering.OfferNo;

-- Equivalent version using the join operator style

SELECT Offering.OfferNo,

COUNT(\*) AS NumStudents

FROM Enrollment INNER JOIN Offering ON Offering.OfferNo = Enrollment.OfferNo

WHERE OffYear = 2013

GROUP BY Offering.OfferNo;

2.

SELECT Enrollment.OfferNo, CourseNo,

AVG(StdGPA) AS AvgGPA

FROM Offering, Enrollment, Student

WHERE Offering.OfferNo = Enrollment.OfferNo

AND Student.StdNo = Enrollment.StdNo

AND OffYear = 2012 AND OffTerm = 'FALL'

GROUP BY Enrollment.OfferNo, CourseNo

HAVING AVG(StdGPA) > 3.0;

-- Equivalent version using the join operator style

SELECT Enrollment.OfferNo, CourseNo,

AVG(StdGPA) AS AvgGPA

FROM Offering INNER JOIN Enrollment ON Offering.OfferNo = Enrollment.OfferNo

INNER JOIN Student ON Student.StdNo = Enrollment.StdNo

WHERE OffYear = 2012 AND OffTerm = 'FALL'

GROUP BY Enrollment.OfferNo, CourseNo

HAVING AVG(StdGPA) > 3.0;

3.

SELECT Enrollment.OfferNo, Offering.CourseNo,

AVG(StdGPA) AS AvgGPA

FROM Offering, Enrollment, Student, Course

WHERE Offering.OfferNo = Enrollment.OfferNo

AND Student.StdNo = Enrollment.StdNo

AND Course.CourseNo = Offering.CourseNo

AND OffYear = 2012 AND OffTerm = 'FALL'

GROUP BY Enrollment.OfferNo, Offering.CourseNo

HAVING AVG(StdGPA) > 3.0;

-- Equivalent version using the join operator style

SELECT Enrollment.OfferNo, Offering.CourseNo,

AVG(StdGPA) AS AvgGPA

FROM Offering INNER JOIN Enrollment ON Offering.OfferNo = Enrollment.OfferNo

INNER JOIN Student ON Student.StdNo = Enrollment.StdNo

INNER JOIN Course ON Course.CourseNo = Offering.CourseNo

WHERE OffYear = 2012 AND OffTerm = 'FALL'

GROUP BY Enrollment.OfferNo, Offering.CourseNo

HAVING AVG(StdGPA) > 3.0;

Lesson 2

1.

SELECT OfferNo, Offering.CourseNo, CrsUnits, OffDays,

OffLocation, OffTime

FROM Faculty, Course, Offering

WHERE Faculty.FacNo = Offering.FacNo

AND Offering.CourseNo = Course.CourseNo

AND OffYear = 2012 AND OffTerm = 'FALL'

AND FacFirstName = 'LEONARD'

AND FacLastName = 'VINCE';

-- Equivalent version using the join operator style

SELECT OfferNo, Offering.CourseNo, CrsUnits, OffDays,

OffLocation, OffTime

FROM Faculty INNER JOIN Offering

ON Offering.FacNo = Faculty.FacNo

INNER JOIN Course ON Course.CourseNo = Offering.CourseNo

WHERE OffYear = 2012 AND OffTerm = 'FALL'

AND FacFirstName = 'LEONARD'

AND FacLastName = 'VINCE';

2.

SELECT Offering.OfferNo, Offering.CourseNo, OffDays,

OffLocation, OffTime, FacFirstName,

FacLastName

FROM Faculty, Offering, Enrollment, Student

WHERE Offering.OfferNo = Enrollment.OfferNo

AND Student.StdNo = Enrollment.StdNo

AND Faculty.FacNo = Offering.FacNo

AND OffYear = 2013 AND OffTerm = 'SPRING'

AND StdFirstName = 'BOB'

AND StdLastName = 'NORBERT';

-- Equivalent version using the join operator style

SELECT Offering.OfferNo, Offering.CourseNo, OffDays,

OffLocation, OffTime, FacFirstName,

FacLastName

FROM Faculty INNER JOIN Offering ON Faculty.FacNo = Offering.FacNo

INNER JOIN Enrollment ON Offering.OfferNo = Enrollment.OfferNo

INNER JOIN Student ON Student.StdNo = Enrollment.StdNo

WHERE OffYear = 2013 AND OffTerm = 'SPRING'

AND StdFirstName = 'BOB'

AND StdLastName = 'NORBERT';

3.

SELECT Offering.OfferNo, Offering.CourseNo, OffDays,

OffLocation, OffTime, CrsUnits, FacFirstName,

FacLastName

FROM Faculty, Offering, Enrollment, Student, Course

WHERE Faculty.FacNo = Offering.FacNo

AND Offering.OfferNo = Enrollment.OfferNo

AND Student.StdNo = Enrollment.StdNo

AND Offering.CourseNo = Course.CourseNo

AND OffYear = 2013 AND OffTerm = 'SPRING'

AND StdFirstName = 'BOB'

AND StdLastName = 'NORBERT';

-- Equivalent version using the join operator style

SELECT Offering.OfferNo, Offering.CourseNo, OffDays,

OffLocation, OffTime, CrsUnits, FacFirstName,

FacLastName

FROM Faculty INNER JOIN Offering ON Faculty.FacNo = Offering.FacNo

INNER JOIN Enrollment ON Offering.OfferNo = Enrollment.OfferNo

INNER JOIN Student ON Student.StdNo = Enrollment.StdNo

INNER JOIN Course ON Offering.CourseNo = Course.CourseNo

WHERE OffYear = 2013 AND OffTerm = 'SPRING'

AND StdFirstName = 'BOB'

AND StdLastName = 'NORBERT';

Lesson 3

1.

SELECT Offering.OfferNo,

COUNT(\*) AS NumStudents,

AVG(StdGPA) AS AvgGPA

FROM Enrollment, Offering, Student

WHERE Offering.OfferNo = Enrollment.OfferNo

AND Student.StdNo = Enrollment.StdNo

AND OffYear = 2013

GROUP BY Offering.OfferNo

HAVING AVG(StdGPA) > 3.3;

-- Equivalent version using the join operator style

SELECT Offering.OfferNo,

COUNT(\*) AS NumStudents,

AVG(StdGPA) AS AvgGPA

FROM Offering INNER JOIN Enrollment ON Offering.OfferNo = Enrollment.OfferNo

INNER JOIN Student ON Student.StdNo = Enrollment.StdNo

WHERE OffYear = 2013

GROUP BY Offering.OfferNo

HAVING AVG(StdGPA) > 3.3;

2.

SELECT CourseNo, Enrollment.OfferNo,

Count(\*) AS NumStudents

FROM Offering, Enrollment

WHERE Offering.OfferNo = Enrollment.OfferNo

AND OffYear = 2013 AND OffTerm = 'SPRING'

GROUP BY Enrollment.OfferNo, CourseNo;

-- Equivalent version using the join operator style

SELECT CourseNo, Enrollment.OfferNo,

Count(\*) AS NumStudents

FROM Offering INNER JOIN Enrollment ON Offering.OfferNo = Enrollment.OfferNo

WHERE OffYear = 2013 AND OffTerm = 'SPRING'

GROUP BY Enrollment.OfferNo, CourseNo;

3.

SELECT Enrollment.OfferNo, CourseNo, FacFirstName,

FacLastName, AVG(StdGPA) AS AvgGPA

FROM Offering, Enrollment, Student, Faculty

WHERE Offering.OfferNo = Enrollment.OfferNo

AND Student.StdNo = Enrollment.StdNo

AND Faculty.FacNo = Offering.FacNo

AND OffYear = 2012 AND OffTerm = 'FALL'

GROUP BY Enrollment.OfferNo, CourseNo,

FacFirstName, FacLastName

HAVING AVG(StdGPA) > 3.0;

-- Equivalent version using the join operator style

SELECT Enrollment.OfferNo, CourseNo, FacFirstName,

FacLastName, AVG(StdGPA) AS AvgGPA

FROM Offering INNER JOIN Enrollment ON Offering.OfferNo = Enrollment.OfferNo

INNER JOIN Student ON Student.StdNo = Enrollment.StdNo

INNER JOIN Faculty ON Faculty.FacNo = Offering.FacNo

WHERE OffYear = 2012 AND OffTerm = 'FALL'

GROUP BY Enrollment.OfferNo, CourseNo,

FacFirstName, FacLastName

HAVING AVG(StdGPA) > 3.0;

Lesson 4

1.

SELECT FacNo AS PerNo, FacFirstName AS FirstName,

FacLastName AS LastName, FacCity AS City,

FacState AS State

FROM Faculty

UNION

SELECT StdNo AS PerNo, StdFirstName AS FirstName,

StdLastName AS LastName, StdCity AS City,

StdState AS State

FROM Student;

2.

SELECT FacNo AS PerNo, FacFirstName AS

FirstName, FacLastName AS LastName,

FacCity AS City, FacState AS State

FROM Faculty

INTERSECT

SELECT StdNo AS PerNo, StdFirstName AS

FirstName, StdLastName AS LastName,

StdCity AS City, StdState AS State

FROM Student;

3.

SELECT FacNo AS PerNo, FacFirstName AS

FirstName, FacLastName AS LastName,

FacCity AS City, FacState AS State

FROM Faculty

MINUS

SELECT StdNo AS PerNo, StdFirstName AS

FirstName, StdLastName AS LastName,

StdCity AS City, StdState AS State

FROM Student;

Lesson 5

1.

INSERT INTO Student

(StdNo, StdFirstName, StdLastName,

StdCity, StdState, StdZip, StdClass,

StdMajor, StdGPA)

VALUES ('999999999','JOE','STUDENT','SEATAC',

'WA','98042-1121','FR','IS', 0.0);

2.

UPDATE Student

SET StdMajor = 'ACCT',

StdClass = 'SO'

WHERE StdFirstName = 'HOMER'

AND StdLastName = 'WELLS';

3.

DELETE FROM Student

WHERE StdMajor = 'IS'

AND StdClass = 'SR';