```
1.  SELECT StdNO, StdFirstName, StdLastName FROM STUDENT
    WHERE StdClass = 'SR' AND StdCity = 'SEATTLE' AND StdGPA BETWEEN 2.7 AND 3.5
```

```
2.  Select * From
    (Select Enrollment.StdNo AS STDNO
    From Enrollment
    Join
    Offering
    ON Enrollment.OfferNo = Offering.OfferNo
    Where Offering.OffYear = 2012 ) T1
    where
    T1.STDNO NOT IN
                  (Select Enrollment.StdNo
                  From Enrollment
                  Join
                  Offering
                  ON Enrollment.OfferNo = Offering.OfferNo
                  Where Offering.OffYear = 2012 AND Offering.OffTerm = 'FALL' AND Offering.CourseNo
    Like 'IS%' )
```

```
3.  SELECT StdNo, StdFirstName, StdLastName, StdMajor, StdGPA FROM Student
    WHERE StdNo IN
           (SELECT StdNo FROM Enrollment
                  WHERE OfferNO IN
                         (SELECT OfferNo FROM OFFERING
                                WHERE OffTerm = 'WINTER') )
    ORDER BY StdMajor, StdGPA;
```

```
4.  Select Offering.OfferNo, Offering.CourseNo, Course.CrsDesc FROM
    Offering JOIN Course ON
    Offering.CourseNo = Course.CourseNo
    WHERE
           OffTerm = 'SUMMER' AND OffDays LIKE '%W%'
```

```
5.  SELECT  Offering.CourseNo, Count (DISTINCT Student.StdNo) AS NumberOfISStudents
    FROM Offering, Student, Faculty, Enrollment
    WHERE
    (FacRank != 'PROF') AND (CourseNo LIKE 'IS%') AND (StdMajor = 'IS')
    AND Offering.FacNo = Faculty.FacNo
    AND Offering.OfferNo = Enrollment.OfferNo
    AND Enrollment.StdNo = Student.StdNo
    GROUP BY CourseNo
    Having Count(DISTINCT Student.StdNo) >4
    ;
```

```
6.  SELECT FacRank, Count(*) AS NOOFNOSUPERVISOR FROM Faculty
    WHERE FacSupervisor IS NULL
    GROUP BY FacRank;
```

```
7.  SELECT
    Supr.FacNo AS FACNO, count(Subr.FacNo) AS NOOFSUPERVISEES
    FROM Faculty Subr, Faculty Supr
    WHERE Subr.FacSupervisor = Supr.FacNo
    group by Supr.FacNo
    order by NOOFSUPERVISEES, Supr.FacNo DESC
```

```
8.  SELECT /* Subr.FacFirstName + ' ' + Subr.FacLastName AS FACULTYNAME,*/
    Supr.FacNo AS FACNO, Supr.FacFirstName + ' ' + Supr.FacLastName AS SUPERVISORNAME,
    count(Subr.FacNo) AS NOOFSUPERVISEES
    FROM Faculty Subr
    right Join
    Faculty Supr
    on Subr.FacSupervisor = Supr.FacNo
    group by Supr.FacNo, /*Subr.FacFirstName , Subr.FacLastName,
    */Supr.FacFirstName,Supr.FacLastName
    order by Supr.FacFirstName, Supr.FacLastName
```

```
9.  SELECT StdMajor, Count (*) As NUMBEROFSENIORS, MIN(StdGPA) AS MINGPA
    FROM Student
    WHERE StdClass IN ('SR')
    GROUP BY StdMajor
    HAVING AVG(StdGPA) <= 3.10
```

```
10. Select OffYear, Offterm, Count (OfferNo) AS NUMOFFERINGS, Count(DISTINCT CourseNo) AS NUMCOURSES
    FROM Offering
    GROUP BY OffYear, Offterm;
```

```
11. Select  T.CourseNo As COURSENO, T.FacFirstName AS FIRSTNAME, T.FacLastName AS LASTNAME,
    T.STUDENTCOUNT AS STUDENTCOUNT, T.Grade AS AVERAGEGRADE
    FROM
    (
    SELECT Offering.CourseNo , Offering.Offterm, Faculty.FacFirstName, FAculty.FacLastName, Count
    (Enrollment.StdNo) AS STUDENTCOUNT, AVG (Enrollment.EnrGrade) AS Grade
    FROM
    Offering
    Left Join
    Faculty
    ON Offering.FacNo = Faculty.FacNo
    Left JOIN
    Enrollment
    ON
    Offering.OfferNo = Enrollment.OfferNo
    GROUP BY  CourseNo, OffTerm, Faculty.FacFirstName, FAculty.FacLastName
    ) T
    Order BY STUDENTCOUNT DESC, CASE WHEN FacFirstName IS NOT NULL
                THEN 0
              ELSE 1
         END, FacFirstName, FacLastName, Grade
```

```
12. SELECT Faculty.FacNo AS FACNO, FacFirstName AS FACFIRSTNAME, FacLastName AS FACLASTNAME
    FROM Faculty, Offering O1, Offering O2
    WHERE Faculty.FacNo = O1.FacNo
    AND Faculty.FacSupervisor = O2.FacNo
    AND O1.OffYear >= 2012 AND O2.OffYear >= 2012
    AND O1.CourseNo = O2.CourseNo
    GROUP BY Faculty.FacNo, FacFirstName, FacLastName
    ORDER BY FacLastName
```

```
13. Select T.FacNo AS FACNO, T.FacFirst + ' ' + T.FacLast AS FACULTYNAME, T.SupFirst + ' ' + T.
    SupLast AS SUPERVISORNAME,
    T.CourseNo,
    SUM (T.FacultySTD) AS FACSTDCOUNT, SUM (T.SuperSTD) AS SUPSTDCOUNT
    From
    (SELECT F1.FacNo AS FacNo, F1.FacFirstName AS FacFirst, F1.FacLastName AS FacLast,
    F2.FacFirstName AS SupFirst, F2.FacLastName AS SupLast, O1.CourseNo AS CourseNo , O1.OfferNo AS
    FacOfferNo , O2.OfferNo AS SUPOfferNo,
    SUM (CASE  WHEN Enrollment.OfferNo = O1.OfferNo Then 1 else 0 end) AS FacultySTD,
    SUM (CASE  WHEN Enrollment.OfferNo = O2.OfferNo Then 1 else 0 end) AS SuperSTD
    FROM Faculty F1, Faculty F2, Offering O1, Offering O2, Enrollment
    WHERE F1.FacSupervisor = F2.FacNo
    AND F1.FacNo = O1.FacNo
    AND F1.FacSupervisor = O2.FacNo
    AND O1.CourseNo = O2.CourseNo
    Group BY O1.CourseNo, O1.OfferNo, O2.OfferNo, F1.FacNo, F1.FacFirstName, F1.FacLastName,
    F2.FacFirstName, F2.FacLastName )T

    Group BY T.FacNo, T.FacFirst, T.FacLast, T.SupFirst, T. SupLast, T.CourseNo,  T.FacultySTD,
    T.SuperSTD
    Having SUM (T.FacultySTD) > SUM (T.SuperSTD)
```

```
14. Select * from
    (Select Offering.CourseNo AS CourseNo, Offering.OfferNo AS offerno, count(Enrollment.StdNo) as
    NOOFSTUDENTS
    From Offering
    Left Join
    Enrollment
    ON
    Offering.OfferNo = Enrollment.OfferNo
    Group BY Offering.CourseNo, Offering.OfferNo) T1
    Where T1.NOOFSTUDENTS IN
                  (Select MIN (T2.NOOFSTUDENTS)
                     From
                         (Select Offering.CourseNo AS CourseNo, Offering.OfferNo AS offerno,
    count(Enrollment.StdNo) as NOOFSTUDENTS
                         From Offering
                         Left Join
                         Enrollment
                         ON
                         Offering.OfferNo = Enrollment.OfferNo
                         Group BY Offering.CourseNo, Offering.OfferNo) T2 )
```

```
15. select T2.CourseNo as COURSENO,T2.CrsDesc AS CRSDESC, COUNT( T2.CourseNo) as NOOFTERMS
    from
    (
           select T1.CourseNo as COURSENO, T1.Year1 as Year3,T1.CourseDesc as CrsDesc from
                  (select DISTINCT o1.CourseNo, o1.OffYear as Year1, c1.CrsDesc as CourseDesc from
    Offering o1
                  JOIN Course c1
                  ON o1.CourseNo = c1.CourseNo
                  where o1.OffTerm = 'summer')T1
           where T1.Year1 in
                  (select  DISTINCT o1.OffYear as Year2 from Offering o1  where OffTerm =
    'summer'))T2
    group by T2.COURSENO,T2.CrsDesc
    having COUNT( T2.COURSENO) = (select count (DISTINCT o1.OffYear) as Year2 from Offering o1
    where OffTerm = 'summer')
```

```
16. select Student.stdno AS STDNO, Student.StdFirstName AS STDFIRSTNAME,
    Student.StdLastName AS STDLASTNAME
     from Student
     inner join
    ( select count(distinct(Offering.CourseNo)) as ISCOURSE, Enrollment.StdNo from Offering
     inner join
    Enrollment on Offering.OfferNo= Enrollment.OfferNo where  Offering.CourseNo like 'IS%'
    and Enrollment.EnrGrade>3
     group by Enrollment.stdno
    having count(distinct(Offering.CourseNo))=(select count(distinct(Offering.CourseNo)) from
    offering where CourseNo like 'IS%')
    ) as T
    on T.stdno= Student.StdNo
```

```
17. Select T3.FACRANK, T3.FACFIRSTNAME, T3.FACFIRSTNAME, T3.SALARY
    from
    (Select T2.FacRank as FACRANK , T2.FACFIRSTNAME as FACFIRSTNAME, T2.FACFIRSTNAME as FACLASTNAME,
    T2.SALARY AS SALARY, MAX(T2.DIFF) AS Diff
    from
    (
    Select  faculty.facrank as FACRANK, faculty.facfirstname AS FACFIRSTNAME, faculty.faclastname as
    FACLASTNAME, faculty.facsalary AS SALARY,
     abs(Faculty.FacSalary - T.AVSALARY) as diff
    from faculty,
    (select faculty.facrank as FacRank, avg(faculty.facsalary) As AVSALARY from faculty
    group by faculty.facrank) T
    where faculty.facrank = T.FacRank
    Group By faculty.facrank, faculty.facfirstname, faculty.faclastname, faculty.facsalary,
    T.AVSALARY) T2
    Group by T2.FacRank, T2.FACFIRSTNAME, T2.FACLASTNAME, T2.SALARY ) T3

    where T3.DIFF IN

    (Select /*T2.FacRank as FACRANK ,*/ /*T2.FACFIRSTNAME as FACFIRSTNAME, T2.FACFIRSTNAME as
    FACLASTNAME, T2.SALARY AS SALARY,*/ MAX(T2.DIFF) AS Diff
    from
    (
    Select  faculty.facrank as FACRANK, faculty.facfirstname AS FACFIRSTNAME, faculty.faclastname as
    FACLASTNAME, faculty.facsalary AS SALARY,
     abs(Faculty.FacSalary - T.AVSALARY) as diff
    from faculty,
    (select faculty.facrank as FacRank, avg(faculty.facsalary) As AVSALARY from faculty
    group by faculty.facrank) T
    where faculty.facrank = T.FacRank
    Group By faculty.facrank, faculty.facfirstname, faculty.faclastname, faculty.facsalary,
    T.AVSALARY) T2
    Group by T2.FacRank/*, T2.FACFIRSTNAME, T2.FACLASTNAME, T2.SALARY */)
```

```
18. Select T.STDMAJOR, Student.StdFirstName, STudent.STDLASTNAME /*Student.STDGPA, T.AVGSTDGPA*/
    From Student
    JOIN
    (
    select stdmajor AS STDMAJOR, avg (stdGPA) AS AVGSTDGPA from student group by stdmajor) T
    ON Student.StDMajor = T.STDMAJOR
    where Student.STDGPA <= T.AVGSTDGPA
    order by T.STDMAJOR, STudent.STDLASTNAME
```

19.

```
Select T.ABC AS 'FLOOR', SUM(T.NOOFSECTIONS) AS NOOFSECTIONS
from
(
SELECT substring(offlocation, 4,1) as ABC, count(offerno) as NOOFSECTIONS
FROM offering
group by offlocation) T
Group by T.ABC;
```

20.

```
Select T.ABC AS 'FLOOR', SUM(T.NOOFSTUDENTS) AS NOOFSTUDENTS
from
(SELECT substring(offering.offlocation, 4,1) as ABC, count(Enrollment.StdNo) as NOOFSTUDENTS
FROM offering
left join Enrollment
on offering.offerno = enrollment.offerno
group by offlocation) T
Group by T.ABC;
```