Assignment – SQL Queries

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Course: **Data Science and AI, CCE, IIT-Madras.**

**Problem Statement:**

Consider yourself to be Sam and you have been given the below tasks to complete using the Table – **STUDIES, SOFTWARE & PROGRAMMER**.

Table: **Studies**

|  |  |  |  |
| --- | --- | --- | --- |
| **PNAME** | **INSTITUTE** | **COURSE** | **COURSE FEE** |
| ANAND | SABHARI | PGDCA | 4500 |
| ALTAF | COIT | DCA | 7200 |
| JULIANA | BDPS | MCA | 22000 |
| KAMALA | PRAGATHI | DCA | 5000 |
| MARY | SABHARI | PGDCA | 4500 |
| NELSON | PRAGATHI | DAP | 6200 |
| PATRICK | PRAGATHI | DCAP | 5200 |
| QADIR | APPLE | HDCA | 14000 |
| RAMESH | SABHARI | PGDCA | 4500 |
| REBECCA | BRILLIANT | DCAP | 11000 |
| REMITHA | BDPS | DCS | 6000 |
| REVATHI | SABHARI | DAP | 5000 |
| VIJAYA | BDPS | DCA | 48000 |

Table: **Software**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **PNAME** | **TITLE** | **DEVELOPIN** | **SCOST** | **DCOST** | **SOLD** |
| MARY | README | CPP | 300 | 1200 | 84 |
| ANAND | PARACHUTES | BASIC | 399.95 | 6000 | 43 |
| ANAND | VIDEO TITLING | PASCAL | 7500 | 16000 | 9 |
| JULIANA | INVENTORY | COBOL | 3000 | 3500 | 0 |
| KAMALA | PAYROLL PKG. | DBASE | 9000 | 20000 | 7 |
| MARY | FINANCIAL ACCT. | ORACLE | 18000 | 85000 | 4 |
| MARY | CODE GENERATOR | C | 4500 | 20000 | 23 |
| PATTRICK | README | CPP | 300 | 1200 | 84 |
| QADIR | BOMBS AWAY | ASSEMBLY | 750 | 3000 | 11 |
| QADIR | VACCINES | C | 1900 | 3100 | 21 |
| RAMESH | HOTEL MGMT. | DBASE | 13000 | 35000 | 4 |
| RAMESH | DEAD LEE | PASCAL | 599.95 | 4500 | 73 |
| REMITHA | PC UTILITIES | C | 725 | 5000 | 51 |
| REMITHA | TSR HELP PKG. | ASSEMBLY | 2500 | 6000 | 7 |
| REVATHI | HOSPITAL MGMT. | PASCAL | 1100 | 75000 | 2 |
| VIJAYA | TSR EDITOR | C | 900 | 700 | 6 |

Table: **Programmer**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PNAME** | **DOB** | **DOJ** | **GENDER** | **PROF1** | **PROF2** | **SALARY** |
| ANAND | 12-Apr-66 | 21-Apr-92 | M | PASCAL | BASIC | 3200 |
| ALTAF | 02-Jul-64 | 13-Nov-90 | M | CLIPPER | COBOL | 2800 |
| JULIANA | 31-Jan-60 | 21-Apr-90 | F | COBOL | DBASE | 3000 |
| KAMALA | 30-Oct-68 | 02-Jan-92 | F | C | DBASE | 2900 |
| MARY | 24-Jun-70 | 01-Feb-91 | F | CPP | ORACLE | 4500 |
| NELSON | 11-Sep-85 | 11-Oct-89 | M | COBOL | DBASE | 2500 |
| PATTRICK | 10-Nov-65 | 21-Apr-90 | M | PASCAL | CLIPPER | 2800 |
| QADIR | 31-Aug-65 | 21-Apr-91 | M | ASSEMBLY | C | 3000 |
| RAMESH | 03-May-67 | 28-Feb-91 | M | PASCAL | DBASE | 3200 |
| REBECCA | 01-Jan-67 | 01-Dec-90 | F | BASIC | COBOL | 2500 |
| REMITHA | 19-Apr-70 | 20-Apr-93 | F | C | ASSEMBLY | 3600 |
| REVATHI | 02-Dec-69 | 02-Jan-92 | F | PASCAL | BASIC | 3700 |
| VIJAYA | 14-Dec-65 | 02-May-92 | F | FOXPRO | C | 3500 |

Software used for Queries from 1 to 60

**MS SQL Developer studio.**

select \* from studies

select \* from software

select \* from programmer

--1. Find out the selling cost AVG for packages developed in Pascal.

select avg(SCOST) as AvgSCOST from software where DEVELOPIN = 'PASCAL'

--2. Display Names, Ages of all Programmers.

Select PNAME,datediff(YY,DOB,getdate()) as age from programmer

--3. Display the Names of those who have done the DAP Course.

Select PNAME, COURSE from studies where COURSE='DAP'

--4. Display the Names and Date of Births of all Programmers Born in January.

select PNAME,DOB from programmer where DATEPART(month,DOB)=1;

SELECT CAST(DOB AS VARCHAR) AS DOB , PNAME FROM PROGRAMMER WHERE DOB LIKE '%JAN%';

--5. What is the Highest Number of copies sold by a Package?

select max(sold) from software

--6. Display lowest course Fee.

select min([COURSE FEE]) from studies

--7. How many programmers done the PGDCA Course?

SELECT COUNT (PNAME) FROM STUDIES WHERE COURSE LIKE 'PGDCA';

--8. How much revenue has been earned thru sales of Packages Developed in C.

SELECT SUM (SOLD\*SCOST) FROM SOFTWARE WHERE DEVELOPIN LIKE 'C';

--9. Display the Details of the Software Developed by Ramesh.

SELECT \* FROM SOFTWARE WHERE PNAME='RAMESH';

--10. How many Programmers Studied at Sabhari?

SELECT COUNT (PNAME) AS NOPROGRAMMERS FROM STUDIES WHERE INSTITUTE='SABHARI';

--11. Display details of Packages whose sales crossed the 2000 Mark.

SELECT \* FROM SOFTWARE WHERE (SOLD\*SCOST)>2000;

--12. Display the Details of Packages for which Development Cost have been recovered.

SELECT \* FROM SOFTWARE WHERE SCOST\*SOLD >= DCOST;

--13. What is the cost of the costliest software development in Basic?

SELECT MAX(SCOST) FROM SOFTWARE GROUP BY DEVELOPIN HAVING DEVELOPIN= 'Basic';

--14. How many Packages Developed in DBASE?

SELECT COUNT(\*) FROM SOFTWARE WHERE DEVELOPIN = 'DBASE';

--15. How many programmers studied in Pragathi?

SELECT COUNT (PNAME) FROM STUDIES WHERE INSTITUTE='PRAGATHI';

--16. How many Programmers Paid 5000 to 10000 for their course?

SELECT COUNT (PNAME) AS NO\_OF\_PROGRAMMERS FROM STUDIES WHERE [COURSE FEE]>=5000 AND [COURSE FEE]<=10000;

--17. What is AVG Course Fee

SELECT AVG ([COURSE FEE]) AS AVERAGECOST FROM STUDIES;

--18. Display the details of the Programmers Knowing C.

SELECT \* FROM PROGRAMMER WHERE PROF1 = 'C' OR PROF2 = 'C';

--19. How many Programmers know either COBOL or PASCAL.

SELECT COUNT (PNAME) AS PROGRAMMERS FROM PROGRAMMER WHERE PROF1 IN ('COBOL' ,'PASCAL' ) OR PROF2 IN ('COBOL' ,'PASCAL' );

--20. How many Programmers Don’t know PASCAL and C

SELECT COUNT (PNAME) AS PROGRAMMERS FROM PROGRAMMER WHERE PROF1 NOT IN ('C','PASCAL') AND PROF2 NOT IN ('C','PASCAL');

--21. How old is the Oldest Male Programmer.

SELECT MAX(DATEDIFF(MONTH,DOB,GETDATE())/12) FROM PROGRAMMER WHERE GENDER = 'M';

--22. What is the AVG age of Female Programmers?

SELECT AVG(DATEDIFF(MONTH,DOB,GETDATE())/12) FROM PROGRAMMER WHERE GENDER = 'F';

--23. Calculate the Experience in Years for each Programmer and Display with their names in Descending order.

SELECT PNAME, DATEDIFF(MONTH,DOJ,GETDATE())/12 AS EXPERIENCE FROM PROGRAMMER ORDER BY EXPERIENCE

--24. Who are the Programmers who celebrate their Birthday’s During the Current

Month?

SELECT PNAME,DOB FROM PROGRAMMER WHERE MONTH(DOB)=MONTH(getdate())

--25. How many Female Programmers are there?

SELECT COUNT (PNAME) AS FEMALE\_PROG FROM PROGRAMMER WHERE GENDER='F';

--26. What are the Languages studied by Male Programmers.

SELECT DISTINCT PROF1 LANGUAGES FROM PROGRAMMER WHERE GENDER='M' UNION SELECT DISTINCT PROF2 FROM PROGRAMMER WHERE GENDER='M';

--27. What is the AVG Salary?

SELECT AVG (SALARY) AS AVGSAL FROM PROGRAMMER;

--28. How many people draw salary 2000 to 4000?

SELECT COUNT(PNAME) FROM PROGRAMMER WHERE SALARY BETWEEN 2000 AND 4000;

--29. Display the details of those who don’t know Clipper, COBOL or PASCAL.

SELECT \* FROM PROGRAMMER WHERE PROF1 NOT IN ('CLIPPER','COBOL','PASCAL') AND PROF2 NOT IN ('CLIPPER','COBOL','PASCAL');

--30. Display the Cost of Package Developed By each Programmer.

SELECT PNAME, SUM(SCOST) AS PackageCOST FROM SOFTWARE GROUP BY PNAME

--31. Display the sales values of the Packages Developed by the each Programmer.

SELECT PNAME,SUM(SCOST+DCOST\*SOLD) AS PackageCOST FROM SOFTWARE GROUP BY PNAME

--32. Display the Number of Packages sold by Each Programmer.

SELECT PNAME,SUM(SOLD)FROM SOFTWARE GROUP BY PNAME

--33. Display the sales cost of the packages Developed by each Programmer Language wise.

SELECT PNAME,DEVELOPIN,SUM(SCOST+DCOST) SaleCost FROM SOFTWARE GROUP BY PNAME,DEVELOPIN

--34. Display each language name with AVG Development Cost, AVG Selling Cost and AVG Price per Copy.

SELECT DEVELOPIN AS LANGUAGE,AVG(DCOST) AS AVGDEVCOST,AVG(SCOST) AS AVGSELLCOST,AVG(SCOST) AS PRICEPERCPY

FROM SOFTWARE

GROUP BY DEVELOPIN

--35. Display each programmer’s name, costliest and cheapest Packages Developed by him or her.

SELECT PNAME,MIN(DCOST) AS CHEAPEST,MAX(DCOST) AS COSTLIEST

FROM SOFTWARE

GROUP BY PNAME

--36. Display each institute name with number of Courses, Average Cost per Course.

SELECT INSTITUTE,COUNT(COURSE) AS NOOFCOURSE,AVG([COURSE FEE]) AS AVGCOSTPERCOUR

FROM STUDIES

GROUP BY INSTITUTE

--37. Display each institute Name with Number of Students.

SELECT INSTITUTE,COUNT(PNAME) AS No\_of\_Students

FROM STUDIES

GROUP BY INSTITUTE

--38. Display Names of Male and Female Programmers. Gender also.

SELECT PNAME AS PRNAME,GENDER

FROM PROGRAMMER

ORDER BY GENDER

--39. Display the Name of Programmers and Their Packages.

SELECT PNAME AS PRNAME,TITLE AS PACKAGE

FROM SOFTWARE

ORDER BY PNAME

--40. Display the Number of Packages in Each Language Except C and C++.

SELECT COUNT(TITLE) AS NOOFPACK,DEVELOPIN AS LANGUAGE

FROM SOFTWARE

WHERE DEVELOPIN !='C' AND DEVELOPIN !='CPP' GROUP BY DEVELOPIN

--41. Display the Number of Packages in Each Language for which Development Cost is less than 1000.

SELECT COUNT(TITLE) AS NOOFPACK,DEVELOPIN AS LANGUAGE

FROM SOFTWARE

WHERE DCOST<1000 GROUP BY DEVELOPIN

--42. Display AVG Difference between SCOST, DCOST for Each Package.

SELECT DEVELOPIN AS LANGUAGE,AVG(DCOST - SCOST) AS DIFF FROM SOFTWARE GROUP BY DEVELOPIN

--43. Display the total SCOST, DCOST and amount to Be Recovered for each Programmer for Those Whose Cost has not yet been Recovered.

SELECT PNAME,SUM(SCOST) AS SCOST, SUM(DCOST) AS DCOST, SUM(DCOST-(SOLD\*SCOST)) AS AMT\_TO\_BE\_RECOVRED FROM SOFTWARE GROUP BY PNAME HAVING SUM(DCOST)>SUM(SOLD\*SCOST)

--44. Display Highest, Lowest and Average Salaries for those earning more than 2000.

SELECT MAX(SALARY)AS HIGEST\_SALARY, MIN(SALARY) AS LOWEST\_SALARY, AVG(SALARY) AS AVG\_SALARY

FROM PROGRAMMER

WHERE SALARY > 2000

--45. Who is the Highest Paid C Programmers?

SELECT MAX(SALARY)

FROM PROGRAMMER

WHERE SALARY > 2000

--46. Who is the Highest Paid Female COBOL Programmer?

SELECT \* FROM PROGRAMMER

WHERE SALARY=(SELECT MAX(SALARY)

FROM PROGRAMMER

WHERE PROF1 LIKE 'COBOL' OR PROF2 LIKE 'COBOL') AND GENDER='F'

--47. Display the names of the highest paid programmers for each Language.

SELECT DISTINCT PNAME, SALARY, PROF1 FROM PROGRAMMER WHERE (SALARY,PROF1) IN (SELECT MAX(SALARY),PROF1 FROM PROGRAMMER GROUP BY PROF1);

--48. Who is the least experienced Programmer.

SELECT \* FROM PROGRAMMER WHERE DOJ=(SELECT MIN(DOJ) FROM PROGRAMMER)

--49. Who is the most experienced male programmer knowing PASCAL.

SELECT \* FROM PROGRAMMER WHERE DOJ=(SELECT MAX(DOJ) FROM PROGRAMMER WHERE PROF1='PASCAL' OR PROF2='PASCAL')

--50. Which Language is known by only one Programmer?

SELECT PROF1 FROM PROGRAMMER GROUP BY PROF1 HAVING PROF1

NOT IN (SELECT PROF2 FROM PROGRAMMER) AND COUNT(PROF1)=1

UNION SELECT PROF2 FROM PROGRAMMER GROUP BY PROF2 HAVING PROF2

NOT IN (SELECT PROF1 FROM PROGRAMMER) AND COUNT(PROF2)=1;

--51. Who is the Above Programmer Referred in 50?

Query Ambiguous

--52. Who is the Youngest Programmer knowing DBASE?

SELECT convert(int,getdate()-DOB,20)/365 AS AGE, PNAME, PROF1, PROF2

FROM PROGRAMMER

WHERE convert(int,getdate()-DOB,20)/365

= (SELECT MIN(convert(int,getdate()-DOB,20)/365)

FROM PROGRAMMER

WHERE PROF1 LIKE 'DBASE' OR PROF2 LIKE 'DBASE')

--53. Which Female Programmer earning more than 3000 does not know C, C++, ORACLE or DBASE?

SELECT \* FROM PROGRAMMER

WHERE GENDER LIKE 'F'

AND SALARY >3000

AND (PROF1 NOT IN('C','C++','ORACLE','DBASE')

OR PROF2 NOT IN('C','C++','ORACLE','DBASE'))

--54. Which Institute has most number of Students?

SELECT INSTITUTE

FROM STUDIES

GROUP BY INSTITUTE

HAVING COUNT(INSTITUTE)= (SELECT MAX(INSTITUTE)

FROM STUDIES GROUP BY INSTITUTE)

--55. What is the Costliest course?

SELECT INSTITUTE FROM STUDIES WHERE [COURSE FEE] = (SELECT MAX([COURSE FEE]) FROM STUDIES);

--56. Which course has been done by the most of the Students?

select course

from (

select

course, count(COURSE), max(cast(count(COURSE) as decimal(10, 2)))

from studies group by course

)

--57. Which Institute conducts costliest course.

SELECT COURSE, [COURSE FEE] FROM STUDIES WHERE [COURSE FEE] = (SELECT MAX([COURSE FEE]) FROM STUDIES);

--58. Display the name of the Institute and Course, which has below AVG coursefee.

SELECT INSTITUTE,COURSE,[COURSE FEE] FROM STUDIES WHERE [COURSE FEE] < (SELECT AVG([COURSE FEE]) FROM STUDIES);

--59. Display the names of the courses whose fees are within 1000 (+ or -) of the Average Fee,

SELECT COURSE,[COURSE FEE] FROM STUDIES WHERE [COURSE FEE] < (SELECT AVG([COURSE FEE])+1000 FROM STUDIES) AND [COURSE FEE] > (SELECT AVG([COURSE FEE])-1000 FROM STUDIES);

--60. Which package has the Highest Development cost?

SELECT TITLE,DCOST FROM SOFTWARE WHERE DCOST = (SELECT MAX(DCOST) FROM SOFTWARE);

--61. Which course has below AVG number of Students?

SELECT COURSE FROM STUDIES GROUP BY COURSE HAVING COUNT(PNAME)

<

(SELECT AVG(CAST(COUNT(PNAME) AS int))

FROM STUDIES

GROUP BY COURSE

);

Software used for Queries from 61 to 107

**Oracle XE 21c with SQL Developer as Front End**

**/\*61 WHICH COURSE HAS BELOW AVG NUMBER OF STUDENTS?\*/**

SELECT COURSE

FROM STUDIES

GROUP BY COURSE

HAVING COUNT(PNAME)

<(SELECT AVG(COUNT(PNAME))

FROM STUDIES

GROUP BY COURSE) ;

**/\*62. WHICH PACKAGE HAS THE LOWEST SELLING COST?\*/**

SELECT TITLE,SCOST

FROM SOFTWARE

WHERE SCOST

= (SELECT MIN(SCOST)

FROM SOFTWARE);

/

**/\*63. WHO DEVELOPED THE PACKAGE THAT HAS SOLD THE LEAST NUMBER OF COPIES \*/**

SELECT PNAME,SOLD

FROM SOFTWARE WHERE SOLD

= (SELECT MIN(SOLD) FROM SOFTWARE);

**/\*64. WHICH LANGUAGE HAS USED TO DEVELOP THE PACKAGE, WHICH HAS THE HIGHEST SALES AMOUNT?\*/**

SELECT DEVELOPIN,SCOST

FROM SOFTWARE

WHERE SCOST

= (SELECT MAX(SCOST)

FROM SOFTWARE)

**/\*65. HOW MANY COPIES OF PACKAGE THAT HAS THE LEAST DIFFERENCE BETWEEN DEVELOPMENT AND SELLING COST WHERE SOLD.\*/**

SELECT SOLD,TITLE

FROM SOFTWARE

WHERE TITLE = (SELECT TITLE

FROM SOFTWARE

WHERE (DCOST-SCOST)=(SELECT MIN(DCOST-SCOST) FROM SOFTWARE))

**/\*66. WHICH IS THE COSTLIEST PACKAGE DEVELOPED IN PASCAL\*/**

SELECT TITLE

FROM SOFTWARE

WHERE DCOST = (SELECT MAX(DCOST)

FROM SOFTWARE

WHERE DEVELOPIN LIKE 'PASCAL')

**/\*67. WHICH LANGUAGE WAS USED TO DEVELOP THE MOST NUMBER OF PACKAGES.\*/**

SELECT DEVELOPIN FROM SOFTWARE

GROUP BY DEVELOPIN

HAVING MAX(DEVELOPIN) = (SELECT MAX(DEVELOPIN) FROM SOFTWARE)

**/\*68. WHICH PROGRAMMER HAS DEVELOPED THE HIGHEST NUMBER OF PACKAGES?\*/**

SELECT PNAME FROM SOFTWARE

GROUP BY PNAME

HAVING MAX(PNAME) = (SELECT MAX(PNAME) FROM SOFTWARE)

**/\*69. WHO IS THE AUTHOR OF THE COSTLIEST PACKAGE?\*/**

SELECT PNAME,DCOST

FROM SOFTWARE

WHERE DCOST = (SELECT MAX(DCOST) FROM SOFTWARE)

**/\*70. DISPLAY THE NAMES OF THE PACKAGES, WHICH HAVE SOLD LESS THAN THE AVG**

**NUMBER OF COPIES. \*/**

SELECT TITLE

FROM SOFTWARE

WHERE SOLD < (SELECT AVG(SOLD) FROM SOFTWARE)

**/\*71. WHO ARE THE AUTHORS OF THE PACKAGES, WHICH HAVE RECOVERED MORE THAN DOUBLE THE DEVELOPMENT COST?\*/**

SELECT DISTINCT PNAME

FROM SOFTWARE

WHERE SOLD\*SCOST > 2\*DCOST

**/\*72. DISPLAY THE PROGRAMMER NAME AND THE CHEAPEST PACKAGES DEVELOPED BY THEM IN EACH LANGUAGE.\*/**

SELECT PNAME,TITLE

FROM SOFTWARE

WHERE DCOST IN (SELECT MIN(DCOST)

FROM SOFTWARE

GROUP BY DEVELOPIN)

**/\*73. DISPLAY THE LANGUAGE USED BY EACH PROGRAMMER TO DEVELOP THE HIGHEST SELLING AND LOWEST-SELLING PACKAGE.\*/**

SELECT PNAME, DEVELOPIN

FROM SOFTWARE

WHERE SOLD IN (SELECT MAX(SOLD)

FROM SOFTWARE

GROUP BY PNAME)

UNION

SELECT PNAME, DEVELOPIN

FROM SOFTWARE

WHERE SOLD IN (SELECT MIN(SOLD)

FROM SOFTWARE

GROUP BY PNAME)

**/\*74. WHO IS THE YOUNGEST MALE PROGRAMMER BORN IN 1965?\*/**

SELECT PNAME

FROM PROGRAMMER

WHERE DOB=(SELECT (MAX(DOB))

FROM PROGRAMMER

WHERE TO\_CHAR(DOB,'YYYY') LIKE '1965')

**/\*75. WHO IS THE OLDEST FEMALE PROGRAMMER WHO JOINED IN 1992?\*/**

SELECT PNAME

FROM PROGRAMMER

WHERE DOJ=(SELECT (MIN(DOJ))

FROM PROGRAMMER

WHERE TO\_CHAR(DOJ,'YYYY') LIKE '1992')

**/\*76. IN WHICH YEAR WAS THE MOST NUMBER OF PROGRAMMERS BORN.\*/**

SELECT DISTINCT TO\_CHAR(DOB,'YYYY')

FROM PROGRAMMER

WHERE TO\_CHAR(DOJ,'YYYY') = (SELECT MIN(TO\_CHAR(DOJ,'YYYY'))

FROM PROGRAMMER)

**/\*77. IN WHICH MONTH DID MOST NUMBER OF PROGRAMMERS JOIN?\*/**

SELECT DISTINCT TO\_CHAR(DOJ,'MONTH')

FROM PROGRAMMER

WHERE TO\_CHAR(DOJ,'MON') = (SELECT MIN(TO\_CHAR(DOJ,'MON'))

FROM PROGRAMMER)

**/\*78. IN WHICH LANGUAGE ARE MOST OF THE PROGRAMMER’S PROFICIENT.\*/**

SELECT PROF1

FROM PROGRAMMER

GROUP BY PROF1

HAVING COUNT(PROF1)=(SELECT MAX(COUNT(PROF1))

FROM PROGRAMMER

GROUP BY PROF1)

OR COUNT(PROF2)=(SELECT MAX(COUNT(PROF2))

FROM PROGRAMMER

GROUP BY PROF2)

UNION

SELECT PROF2

FROM PROGRAMMER

GROUP BY PROF2

HAVING COUNT(PROF1)=(SELECT MAX(COUNT(PROF1))

FROM PROGRAMMER

GROUP BY PROF1)

OR COUNT(PROF2)=(SELECT MAX(COUNT(PROF2))

FROM PROGRAMMER

GROUP BY PROF2)

**/\*79. WHO ARE THE MALE PROGRAMMERS EARNING BELOW THE AVG SALARY OF FEMALE PROGRAMMERS?\*/**

SELECT PNAME

FROM PROGRAMMER

WHERE GENDER LIKE 'M'

AND SALARY < (SELECT(AVG(SALARY)) FROM PROGRAMMER WHERE GENDER LIKE 'F')

**/\*80. WHO ARE THE FEMALE PROGRAMMERS EARNING MORE THAN THE HIGHEST PAID MALE EMPLOYEER\*/**

SELECT PNAME FROM PROGRAMMER WHERE GENDER LIKE 'F' AND SALARY > (SELECT(MAX(SALARY))

FROM PROGRAMMER

WHERE GENDER LIKE 'M')

**/\*81. WHICH LANGUAGE HAS BEEN STATED AS THE PROFICIENCY BY MOST OF THE PROGRAMMERS? \*/**

SELECT PROF1

FROM PROGRAMMER

GROUP BY PROF1

HAVING PROF1 >(SELECT MAX(PROF2)

FROM PROGRAMMER)

**/\*82. DISPLAY THE DETAILS OF THOSE WHO ARE DRAWING THE SAME SALARY.\*/**

SELECT PNAME, SALARY FROM PROGRAMMER WHERE

SALARY = ANY(SELECT SALARY FROM PROGRAMMER P GROUP BY SALARY HAVING

SALARY=P.SALARY AND COUNT(\*)>1)

**/\*83. DISPLAY THE DETAILS OF THE SOFTWARE DEVELOPED BY THE MALE PROGRAMMERS EARNING MORE THAN 3000/-.\*/**

SELECT S.PNAME,P.SALARY,S.TITLE

FROM PROGRAMMER P,SOFTWARE S

WHERE P.PNAME=S.PNAME AND P.SALARY>3000 AND GENDER='M';

**/\*84. DISPLAY THE DETAILS OF THE PACKAGES DEVELOPED IN PASCAL BY THE FEMALE PROGRAMMERS.\*/**

SELECT S.\*

FROM PROGRAMMER P,SOFTWARE S

WHERE P.PNAME=S.PNAME AND GENDER='F' AND DEVELOPIN ='PASCAL';

**/\*85. DISPLAY THE DETAILS OF THE PROGRAMMERS WHO JOINED BEFORE 1990.\*/**

SELECT \*

FROM PROGRAMMER

WHERE TO\_CHAR(DOJ,'YY')<90;

**/\*86. DISPLAY THE DETAILS OF THE SOFTWARE DEVELOPED IN C BY FEMALE PROGRAMMERS OF PRAGATHI.\*/**

SELECT S.\*

FROM SOFTWARE S,STUDIES ST,PROGRAMMER P

WHERE S.PNAME=ST.PNAME AND P.PNAME=S.PNAME AND GENDER='F' AND INSTITUTE='PRAGATHI';

**/\*87. DISPLAY THE NUMBER OF PACKAGES, NO. OF COPIES SOLD AND SALES VALUE OF EACH PROGRAMMER INSTITUTE WISE.\*/**

SELECT STUDIES.INSTITUTE, COUNT(SOFTWARE.DEVELOPIN), COUNT(SOFTWARE.SOLD), SUM(SOFTWARE.SOLD\*SOFTWARE.SCOST)

FROM SOFTWARE,STUDIES

WHERE SOFTWARE.PNAME=STUDIES.PNAME

GROUP BY STUDIES.INSTITUTE;

**/\*88. DISPLAY THE DETAILS OF THE SOFTWARE DEVELOPED IN DBASE BY MALE PROGRAMMERS, WHO BELONG TO THE INSTITUTE IN WHICH MOST NUMBER OF PROGRAMMERS STUDIED.\*/**

SELECT SOFTWARE.\* FROM PROGRAMMER,SOFTWARE,STUDIES

WHERE PROGRAMMER.PNAME=SOFTWARE.PNAME AND SOFTWARE.PNAME=STUDIES.PNAME AND PROGRAMMER.PNAME=STUDIES.PNAME AND GENDER='M' AND DEVELOPIN='DBASE' AND INSTITUTE

=(SELECT INSTITUTE FROM STUDIES GROUP BY INSTITUTE HAVING COUNT(INSTITUTE)

=(SELECT MAX(COUNT(INSTITUTE)) FROM STUDIES GROUP BY INSTITUTE));

**/\*89. DISPLAY THE DETAILS OF THE SOFTWARE DEVELOPED BY THE MALE PROGRAMMERS BORNBEFORE 1965 AND FEMALE PROGRAMMERS BORN AFTER 1975.\*/**

SELECT P.PNAME,S.PNAME

FROM PROGRAMMER P,SOFTWARE S

WHERE S.PNAME=P.PNAME AND ((P.GENDER='M' AND TO\_CHAR(P.DOB,'YY')<65) OR (P.GENDER='F' AND TO\_CHAR(P.DOB,'YY')>75));

SELECT PNAME

FROM SOFTWARE

WHERE PNAME =(

SELECT PNAME

FROM PROGRAMMER

WHERE (GENDER='M' AND TO\_CHAR(DOB,'YY')<65) OR (GENDER='F' AND TO\_CHAR(DOB,'YY')>75))

**/\*90. DISPLAY THE DETAILS OF THE SOFTWARE THAT HAS DEVELOPED IN THE LANGUAGE WHICH IS NEITHER THE FIRST NOR THE SECOND PROFICIENCY OF THE PROGRAMMERS. \*/**

SELECT S.\*

FROM PROGRAMMER P,SOFTWARE S

WHERE S.PNAME=P.PNAME AND (DEVELOPIN <> PROF1 AND DEVELOPIN <> PROF2);

**/\*91. DISPLAY THE DETAILS OF THE SOFTWARE DEVELOPED BY THE MALE STUDENTS OF SABHARI.\*/**

SELECT S.\*

FROM PROGRAMMER P,SOFTWARE S,STUDIES ST

WHERE P.PNAME=S.PNAME AND S.PNAME=ST.PNAME AND GENDER='M' AND INSTITUTE='SABHARI';

**/\*92. DISPLAY THE NAMES OF THE PROGRAMMERS WHO HAVE NOT DEVELOPED ANY PACKAGES.\*/**

SELECT PNAME

FROM PROGRAMMER

WHERE PNAME NOT IN(SELECT PNAME

FROM SOFTWARE);

**/\*93. WHAT IS THE TOTAL COST OF THE SOFTWARE DEVELOPED BY THE PROGRAMMERS OF APPLE?\*/**

SELECT SUM(SCOST)

FROM SOFTWARE S,STUDIES ST

WHERE S.PNAME=ST.PNAME AND INSTITUTE='APPLE';

**/\*94. WHO ARE THE PROGRAMMERS WHO JOINED ON THE SAME DAY?\*/**

SELECT A.PNAME,A.DOJ

FROM PROGRAMMER A,PROGRAMMER B

WHERE A.DOJ=B.DOJ AND A.PNAME <> B.PNAME;

**/\*95. WHO ARE THE PROGRAMMERS WHO HAVE THE SAME PROF2?\*/**

SELECT UNIQUE(A.PNAME),A.PROF2

FROM PROGRAMMER A,PROGRAMMER B

WHERE A.PROF2=B.PROF2 AND A.PNAME <> B.PNAME;

**/\*96. DISPLAY THE TOTAL SALES VALUE OF THE SOFTWARE, INSTITUTE WISE.\*/**

SELECT STUDIES.INSTITUTE,SUM(SOFTWARE.SOLD\*SOFTWARE.SCOST)

FROM SOFTWARE,STUDIES

WHERE STUDIES.PNAME=SOFTWARE.PNAME

GROUP BY STUDIES.INSTITUTE;

**/\*97. IN WHICH INSTITUTE DOES THE PERSON WHO DEVELOPED THE COSTLIEST PACKAGE STUDIED.\*/**

SELECT INSTITUTE

FROM SOFTWARE ST,STUDIES S

WHERE S.PNAME=ST.PNAME

GROUP BY INSTITUTE,DCOST

HAVING MAX(DCOST)

=(SELECT MAX(DCOST)

FROM SOFTWARE);

**/\*98. WHICH LANGUAGE LISTED IN PROF1, PROF2 HAS NOT BEEN USED TO DEVELOP ANY PACKAGE.\*/**

SELECT PROF1

FROM PROGRAMMER

WHERE PROF1 NOT IN(SELECT DEVELOPIN

FROM SOFTWARE)

UNION

SELECT PROF2

FROM PROGRAMMER

WHERE PROF2

NOT IN(SELECT DEVELOPIN

FROM SOFTWARE);

**/\*99. HOW MUCH DOES THE PERSON WHO DEVELOPED THE HIGHEST SELLING PACKAGE EARN AND WHAT COURSE DID HE/SHE UNDERGO. \*/**

SELECT P1.SALARY,S2.COURSE

FROM PROGRAMMER P1,SOFTWARE S1,STUDIES S2

WHERE P1.PNAME=S1.PNAME AND S1.PNAME=S2.PNAME AND SCOST

=(SELECT MAX(SCOST)

FROM SOFTWARE);

**/\*100. WHAT IS THE AVG SALARY FOR THOSE WHOSE SOFTWARE SALES IS MORE THAN 50,000/-.\*/**

SELECT AVG(SALARY)

FROM PROGRAMMER P,SOFTWARE S

WHERE P.PNAME=S.PNAME AND SOLD\*SCOST>50000;

**/\*101. HOW MANY PACKAGES WERE DEVELOPED BY STUDENTS, WHO STUDIED IN INSTITUTE THAT CHARGE THE LOWEST COURSE FEE?\*/**

SELECT S.PNAME, COUNT(S.PNAME)

FROM SOFTWARE S,STUDIES ST

WHERE S.PNAME=ST.PNAME

GROUP BY S.PNAME,COURSE\_FEE

HAVING MIN(COURSE\_FEE)

=(SELECT MIN(COURSE\_FEE)

FROM STUDIES);

**/\*102. HOW MANY PACKAGES WERE DEVELOPED BY THE PERSON WHO DEVELOPED THE CHEAPEST PACKAGE, WHERE DID HE/SHE STUDY?\*/**

SELECT COUNT(\*)

FROM PROGRAMMER P,SOFTWARE S

WHERE S.PNAME=P.PNAME

GROUP BY DEVELOPIN

HAVING MIN(DCOST)

=(SELECT MIN(DCOST)

FROM SOFTWARE);

**/\*103. HOW MANY PACKAGES WERE DEVELOPED BY THE FEMALE PROGRAMMERS EARNING MORE THAN THE HIGHEST PAID MALE PROGRAMMER?\*/**

SELECT COUNT(DEVELOPIN)

FROM PROGRAMMER P,SOFTWARE S

WHERE S.PNAME=P.PNAME AND GENDER='F' AND SALARY

>(SELECT MAX(SALARY)

FROM PROGRAMMER P,SOFTWARE S

WHERE S.PNAME=P.PNAME AND GENDER='M');

**/\*104. HOW MANY PACKAGES ARE DEVELOPED BY THE MOST EXPERIENCED PROGRAMMER FORM BDPS. \*/**

SELECT COUNT(\*)

FROM SOFTWARE S,PROGRAMMER P

WHERE P.PNAME=S.PNAME

GROUP BY DOJ

HAVING MAX(DOJ)

=(SELECT MAX(DOJ)

FROM STUDIES ST,PROGRAMMER P, SOFTWARE S

WHERE P.PNAME=S.PNAME AND ST.PNAME=P.PNAME AND (INSTITUTE='BDPS'));

**/\*105. LIST THE PROGRAMMERS (FORM THE SOFTWARE TABLE) AND THE INSTITUTES THEY STUDIED , INCLUDING THOSE WHO DIDN'T DEVELOP ANY PACKAGE..\*/**

SELECT PNAME,INSTITUTE

FROM STUDIES

WHERE PNAME

NOT IN(SELECT PNAME

FROM SOFTWARE);

**/\*106. LIST EACH PROF WITH THE NUMBER OF PROGRAMMERS HAVING THAT PROF AND THE NUMBER OF THE PACKAGES IN THAT PROF.\*/**

SELECT COUNT(\*),SUM(SCOST\*SOLD-DCOST) "PROFIT"

FROM SOFTWARE

WHERE DEVELOPIN IN (SELECT PROF1

FROM PROGRAMMER) GROUP BY DEVELOPIN;

**/\*107. LIST THE PROGRAMMER NAMES (FROM THE PROGRAMMER TABLE) AND NO. OF PACKAGESEAC H HAS DEVELOPED. \*/**

SELECT S.PNAME,COUNT(DEVELOPIN)

FROM PROGRAMMER P1,SOFTWARE S

WHERE P1.PNAME=S.PNAME

GROUP BY S.PNAME;