**Title of Applications: SQL ASSIGNMENT**

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**Queries-I**

1.Find out the SELLING COST AVERAGE for the packages developed in PASCAL?

SELECT AVG(softwarecost) AS average\_selling\_cost

FROM programmers.software

WHERE language\_developed = 'Pascal';

2) Display the names and ages of all programmers.

SELECT FLOOR(DATEDIFF(CURRENT\_DATE, dob) / 365.25) AS age FROM programmers.programmer;

3) Display the names and ages of all the programmers who have undergone training in DCS course.

SELECT name,course FROM studies

WHERE course = 'dcs';

(or)

SELECT Programmer.name, Programmer.age

FROM Programmer

INNER JOIN Studies ON Programmer.name = studies.name

WHERE Studies.course = 'DCS';

4) What is the highest numbers of copies sold by a package?

SELECT MAX(sold) FROM software;

5) Display the names and date of birth of all the programmer born in JANUARY.

SELECT name, dob

FROM Programmer

WHERE MONTH(dob) = 1;

6) Display lowest course fee.

SELECT MIN(course\_cost) FROM studies;

7) How many programmer has done PGDCA course

SELECT COUNT(\*)

FROM studies

WHERE course = 'pgdca';

8) How much revenue has been earned through sales of packages in C

SELECT SUM(softwarecost\*sold) AS total\_revenue

FROM software

WHERE language\_developed = 'C';

9) Display the details of software developed by Ramesh

SELECT name, title,language\_developed,softwarecost,developmentcost,sold

FROM software

WHERE name = 'ramesh';

10) How many programmers studied at SABHARI.

SELECT name

FROM studies

WHERE studies\_place = 'Sabhari';

11) Display the details of PACKAGES whose sales crossed the 20000 mark.

SELECT \*

FROM programmers.software

WHERE softwarecost >= 20000;

12) Find out the number of copies which should be sold in order to recover the development cost of each package.

SELECT

name,

developmentcost,

softwarecost,

CEIL(developmentcost / softwarecost) AS copies\_required

FROM

software;

13) What is the price of the costliest software developed in BASIC?

SELECT sales\_cost,language\_developed

FROM software

WHERE language\_developed = 'basic';

14) Display the details of packages for which development cost has been recovered.

SELECT

\*

FROM

software

WHERE

developmentcost <= softwarecost;

15) How many packages were developed in dbase?

SELECT name,title,sales\_cost,language\_developed

FROM software

WHERE language\_developed = 'dbase';

16) How many programmers studies at paragathi?

SELECT name,studies\_place

FROM studies

WHERE studies\_place = 'paragathi';

SELECT COUNT(\*)

FROM studies

WHERE studies\_place = 'paragathi';

17) How many programmers paid 5000 to 10000 for their course?

SELECT COUNT(\*)

FROM studies

WHERE course\_cost BETWEEN 5000 AND 10000;

18) What is the average course fee?

SELECT AVG(course\_cost)

FROM studies;

19) Display the details of programmers knowing c?

SELECT name,language1,language2

FROM programmer

WHERE language1 = 'c' OR language2 ='c';

20) How many programmers know either Cobol or Pascal?

SELECT COUNT(\*)

FROM studies

WHERE language1 = 'Cobol' OR language2 ='Pascal';

SELECT name,language1,language2

FROM programmer

WHERE language1 = 'Cobol' OR language2 ='Pascal';

21) How many programmers don't know Pascal & C?

SELECT COUNT(\*)

FROM Programmer

WHERE language1 NOT IN ('Pascal', 'C') && language2 NOT IN ('Pascal', 'C') ;

22) How old is the oldest male programmers?

SELECT MAX(age) AS oldest\_age

FROM Programmer

WHERE sex = 'male';

23) What is the average age of female programmers?

SELECT name, age

FROM Programmer

WHERE sex = 'female'

AND age = (SELECT avg(age) FROM Programmer WHERE sex = 'female');

24) Calculate the experience in years for each programmers and display along with the names in descending order?

SELECT

name,

DATEDIFF(CURRENT\_DATE, doj) / 365 AS experience\_years

FROM

programmer

ORDER BY

experience\_years DESC;

25) Who are the programmers who celebrate their birthday during the current month?

SELECT \*

FROM programmers.programmer

WHERE MONTH(dob) = MONTH(CURDATE())

AND DAY(dob) = DAY(CURDATE());

26) How many female programmers are there?

SELECT COUNT(\*)

FROM programmer

WHERE sex= 'female';

27) What are the languages known by the male programmers?

SELECT name, language1,language2

FROM Programmer

WHERE sex = 'male'

28) What is the Average salary?

SELECT SUM(salary) / COUNT(salary) AS average\_salary FROM programmer;

29) How many people draw 2000 to 4000?

SELECT name,salary

FROM programmer

WHERE salary BETWEEN 2000 AND 4000;

30) Display the details of those who don't know Clipper, Cobol or Pascal?

SELECT name,language1,language2

FROM Programmer

WHERE language1 NOT IN ('Pascal', 'Cobol','Clipper')

&& language2 NOT IN ('Pascal', 'Cobol','Clipper') ;

31) How many Female programmers knowing C are above 24 years of age?

SELECT name, language1 ,language2

FROM programmer

WHERE language1 = 'c' AND age>24 AND sex='female';

32) Who are the programmers who will be celebrating their Birthday within a week?

SELECT \*

FROM programmer

WHERE DATE\_ADD(dob, INTERVAL YEAR(CURDATE()) - YEAR(dob) YEAR) BETWEEN CURDATE() AND DATE\_ADD(CURDATE(), INTERVAL 7 DAY);

33) Display the details of those with less than a year's experience?

SELECT \*

FROM programmers.programmer

WHERE DATEDIFF(CURDATE(), doj) < 365;

34) Display the details of those who will be completing 2 years of service this year?

SELECT \*

FROM programmer

WHERE DATEDIFF(CURDATE(), date\_of\_joining) >= 365\*2

AND DATEDIFF(CURDATE(), date\_of\_joining) < 365\*3;

35) Calculate the amount to be recovered for those packages whose development cost has not been recovered?

SELECT

name, developmentcost, softwarecost,

(developmentcost - softwarecost) AS amount\_to\_be\_recovered

FROM

software

WHERE

developmentcost > softwarecost;

36) List the packages which have not been sold so far?

SELECT MAX(sold) FROM software;

37) Find out the cost of the software developed by Mary?

SELECT name,softwarecost

FROM software

WHERE name = 'mary';

38) Display the institute’s names from the studies table without duplicates?

SELECT DISTINCT studies\_place

FROM studies;

39) How many different courses are mentioned in the studies table?

SELECT DISTINCT course

FROM studies;

40) Display the names of the programmers whose names contain 2 occurrences of the letter A?

SELECT name

FROM programmer

WHERE name LIKE '%A%A%';

41) Display the names of programmers whose names contain unto 5 characters?

SELECT name

FROM programmer

WHERE LENGTH(name) <= 5;

42) How many female programmers knowing COBOL have more than 2 years experience?

SELECT name, language1, language2

FROM programmer

WHERE DATEDIFF(CURDATE(), doj) <= 365\*2

AND sex = 'female'

AND (language1 = 'Cobol'

OR language2 = 'Cobol');

43) What is the length of the shortest name in the programmer table?

SELECT \*

FROM programmer

WHERE LENGTH(name) = (SELECT MIN(LENGTH(name)) FROM programmer);

44) What is the average development cost of a package developed in COBOL?

SELECT AVG(developmentcost) AS average\_developmentcost

FROM programmers.software

WHERE language\_developed = 'COBOL';

45) Display the name, sex, dob (DD/MM/YY format), doj for all the programmers without using conversion function?

// string manipulation function

SELECT name, sex,

CONCAT(

SUBSTRING(dob, 9, 2), '/',

SUBSTRING(dob, 6, 2), '/',

SUBSTRING(dob, 3, 2)

) AS dob\_dd\_mm\_yy,

CONCAT(

SUBSTRING(doj, 9, 2), '/',

SUBSTRING(doj, 6, 2), '/',

SUBSTRING(doj, 3, 2)

) AS doj\_dd\_mm\_yy

FROM programmer;

46) Who are the programmers who were born on the last day of the month?

SELECT name, dob

FROM Programmer

WHERE dayofmonth(dob) = DAY(LAST\_DAY(dob));

47) What is the amount paid in salaries of the male programmers who do not know Cobol?

SELECT name,salary

FROM Programmer

WHERE sex='male' AND(language1 NOT IN ('Cobol') AND language2 NOT IN ('Cobol')) ;

48) Display the title, scost, dcost and difference between scost and dcost in descending order of difference?

WHERE language\_developed = 'COBOL';

SELECT title, softwarecost, developmentcost, (developmentcost-softwarecost ) AS cost\_difference

FROM programmers.software

ORDER BY softwarecost DESC, developmentcost DESC;

49) Display the name, dob, doj of those month of birth and month of joining are same?

SELECT name, dob, doj

FROM programmer

WHERE MONTH(dob) = MONTH(doj);

50) Display the names of the packages whose names contain more than 1 word?

SELECT name

FROM programmer

WHERE LENGTH(name) > 1;

**Queries-II**

1)Display THE NUMBER OF packages developed in EACH language.

SELECT \* FROM programmers.software;

SELECT language\_developed, COUNT(\*) AS num\_packages

FROM software

GROUP BY language\_developed;

2)Display THE NUMBER OF packages developed by EACH person.

SELECT \* FROM programmers.software;

SELECT name,language\_developed, COUNT(\*) AS num\_packages

FROM software

GROUP BY name;

3)Display THE NUMBER OF male and female programmer.

SELECT sex,COUNT(\*) AS num\_programmers

FROM programmer

GROUP BY sex;

4)Display THE COSTLIEST packages and HIGEST selling developed in EACH language.

SELECT MAX(softwarecost), MIN(softwarecost) FROM software;

5)Display THE NUMBER OF people BORN in EACH YEAR.

SELECT YEAR(dob) AS birth\_year, COUNT(\*) AS number\_of\_people

FROM programmer

GROUP BY YEAR(dob);

6)Display THE NUMBER OF people JOINED in EACH YEAR.

SELECT YEAR(doj) AS join\_year, COUNT(\*) AS number\_of\_people

FROM programmer

GROUP BY YEAR(doj);

7)Display THE NUMBER OF people BORN in EACH MONTH.

SELECT MONTH(dob) AS Birth\_Month, COUNT(\*) AS number\_of\_people

FROM programmer

GROUP BY MONTH(dob);

8)Display THE NUMBER OF people JOINED in EACH MONTH.

SELECT MONTH(doj) AS Join\_Month, COUNT(\*) AS number\_of\_people

FROM programmer

GROUP BY MONTH(doj);

9)Display the language wise COUNTS of prof1.

SELECT language1,COUNT(\*)

FROM programmer

group by language1

order by language1;

10)Display the language wise COUNTS of prof2.

SELECT language2,COUNT(\*)

FROM programmer

group by language2

order by language2;

11) Display THE NUMBER OF people in EACH salary group.

SELECT salary,COUNT(\*)

FROM programmer

group by salary

order by salary;

12) Display THE NUMBER OF people who studied in EACH institute.

SELECT studies\_place,COUNT(\*)

FROM studies

group by studies\_place

order by studies\_place;

13) Display THE NUMBER OF people who studied in EACH course

SELECT course,COUNT(\*)

FROM studies

group by course

order by course;.

14) Display the TOTAL development COST of the packages developed in EACH language.

SELECT language\_developed,

SUM(softwarecost) AS total\_software\_cost,

SUM(developmentcost) AS total\_development\_cost

FROM software

GROUP BY language\_developed

ORDER BY language\_developed;

15) Display the selling cost of the package developed in EACH language.

SELECT language\_developed, softwarecost

FROM software

ORDER BY language\_developed, softwarecost;

16) Display the cost of the package developed by EACH programmer.

SELECT name,developmentcost

FROM software

ORDER BY name,developmentcost;

17) Display the sales values of the package developed inEACH programmer.

SELECT name,softwarecost

FROM software

ORDER BY name,softwarecost;

18) Display the NUMBER of packages developed by EACH programmer.

SELECT name,sold

FROM software

ORDER BY name,sold;

19) Display the sales COST of packages developed by EACH programmer language wise.

SELECT language\_developed,name,developmentcost

from software

order by language\_developed

20) Display EACH programmers name, costliest package and cheapest packages developed by Him/Her.

SELECT name,

MAX(developmentcost) AS costliest\_package,

MIN(developmentcost) AS cheapest\_package

FROM software

GROUP BY name;

21) Display EACH language name with AVERAGE development cost, AVERAGE cost, selling cost and AVERAGE price per copy.

SELECT

language\_developed,

AVG(developmentcost) AS avg\_development\_cost,

AVG(softwarecost) AS avg\_selling\_cost,

AVG(softwarecost / sold) AS avg\_price\_per\_copy

FROM

software

GROUP BY

language\_developed;

22) Display EACH institute name with NUMBER of courses, AVERAGE cost per course.

SELECT

studies\_place,

COUNT(\*) AS num\_courses,

AVG(course\_cost) AS average\_cost\_per\_course

FROM studies

GROUP BY studies\_place;

23) Display EACH institute name with NUMBER of students.

SELECT

studies\_place,

COUNT(\*) AS num\_students

FROM studies

GROUP BY studies\_place

ORDER BY studies\_place;

24) Display names of male and female programmers.

SELECT name,sex from programmer;

25) Display the programmer's name and their packages.

select name,title from software;

26) Display the NUMBER of packages in EACH language.

SELECT

language\_developed,

COUNT(\*) AS num\_packages

FROM

software

GROUP BY

language\_developed;

27) Display the NUMBER of packages in EACH language for which development cost is less than 1000.

FROM

software

WHERE

developmentcost < 1000

GROUP BY

language\_developed;

28) Display the AVERAGE difference BETWEEN scost and dcost for EACH language

SELECT

language\_developed,

AVG(developmentcost - softwarecost) AS average\_cost\_difference

FROM software

GROUP BY language\_developed;

29) Display the TOTAL scost, dcsot and amount TOBE recovered for EACH programmer for whose dcost HAS NOT YET BEEN recovered.

SELECT

name,

SUM(softwarecost) AS total\_scost,

SUM(developmentcost) AS total\_dcost,

SUM(softwarecost) - SUM(developmentcost) AS amount\_to\_be\_recovered

FROM software

GROUP BY name

HAVING SUM(developmentcost) < SUM(softwarecost);

30) Display highest, lowest and average salaries for THOSE earning MORE than 2000.

SELECT

MAX(salary) AS highest\_salary,

MIN(salary) AS lowest\_salary,

AVG(salary) AS average\_salary

FROM programmer

WHERE salary > 2000;

**Queries-III**

1. Who is the highest paid C programmer?

SELECT name, salary

FROM Programmer

WHERE language1 = 'c' OR language2= 'c'

ORDER BY salary DESC

LIMIT 2;

1. Who is the highest paid female cobol programmer?

SELECT name, salary

FROM Programmer

WHERE sex ='female' AND( language1 = 'Cobol' OR language2= 'Cobol' )

ORDER BY salary DESC

LIMIT 1;

1. Display the name of the HIGEST paid programmer for EACH language (prof1)

SELECT p.name, p.salary, p.language1

FROM Programmer p

JOIN (

SELECT language1, MAX(salary) AS max\_salary

FROM Programmer

GROUP BY language1

) AS max\_salaries

ON p.language1 = max\_salaries.language1 AND p.salary = max\_salaries.max\_salary;

1. Who is the LEAST experienced programmer?

SELECT

YEAR(doj) AS join\_year,

MIN(doj) AS least\_experience\_date

FROM

programmer

GROUP BY

YEAR(doj)

LIMIT 1;

5) Who is the MOST experienced programmer?

SELECT

YEAR(doj) AS join\_year,

MAX(doj) AS least\_experience\_date

FROM

programmer

GROUP BY

YEAR(doj)

LIMIT 1;

6)Which language is known by ONLY ONE programmer?

SELECT language, COUNT(\*) AS num\_programmers

FROM (

SELECT language1 AS language FROM Programmer

UNION ALL

SELECT language2 FROM Programmer

) AS combined\_languages

GROUP BY language

HAVING num\_programmers = 1;

7)Who is the YONGEST programmer knowing DBASE?

SELECT name, age

FROM programmer

JOIN software ON software.name = programmer.name

WHERE developed\_language = 'DBASE'

ORDER BY age ASC

LIMIT 1;

8) Which institute has MOST NUMBER of students?

SELECT studies\_place, COUNT(\*) AS num\_students

FROM studies

GROUP BY studies\_place

ORDER BY num\_students DESC

LIMIT 1;

9) Who is the above programmer?

SELECT studies\_place, name, COUNT(\*) AS num\_students

FROM studies

GROUP BY studies\_place, name

ORDER BY num\_students DESC

LIMIT 1;

10)Which female programmer earns MORE than 3000/- but DOES NOT know C, C++, Oracle or Dbase?

SELECT name, developmentcost

FROM software

WHERE sex = 'female'

AND (language\_developed NOT IN ('C', 'C++', 'Oracle','dbase') OR developmentcost > 3000);

11)Which is the COSTLIEST course?

SELECT name, course, MAX (course\_cost)

FROM studies

GROUP BY name, course

LIMIT 1;

12)Which course has been done by MOST of the students?

SELECT course, COUNT(\*) AS num\_students

FROM studies

GROUP BY course

ORDER BY num\_students DESC

LIMIT 1;

13)Display name of the institute and course Which has below AVERAGE course fee?

SELECT AVG(num\_students) AS average\_students\_per\_course

FROM (

SELECT COUNT(\*) AS num\_students

FROM studies

GROUP BY course

) AS course\_counts;

14)Which institute conducts COSTLIEST course?

SELECT studies\_place, course, MAX(course\_cost) AS max\_course\_cost

FROM studies

GROUP BY studies\_place, course

ORDER BY max\_course\_cost DESC

LIMIT 1;

15)Which course has below AVERAGE number of students?

SELECT course, COUNT(\*) AS num\_students

FROM studies

GROUP BY course

HAVING COUNT(\*) < (SELECT AVG(num\_students) FROM (SELECT COUNT(\*) AS num\_students FROM studies GROUP BY course) AS course\_counts);

16)Which institute conducts the above course?

SELECT studies\_place, course, COUNT(\*) AS num\_students

FROM studies

JOIN (

SELECT course, COUNT(\*) AS num\_students

FROM studies

GROUP BY course

HAVING num\_students < (

SELECT AVG(num\_students) AS average\_students\_per\_course

FROM (

SELECT COUNT(\*) AS num\_students

FROM studies

GROUP BY course

) AS course\_counts

)

) AS below\_average\_courses ON studies.course = below\_average\_courses.course

GROUP BY studies\_place, course;

17) Display names of the course WHOSE fees are within 1000(+ or -) of the AVERAGE fee.

SELECT name

FROM studies

WHERE course\_cost BETWEEN (SELECT AVG(course\_cost) - 1000 FROM studies) AND (SELECT AVG(course\_cost) + 1000 FROM studies);

18) Which package has the HIGEST development cost?

SELECT name, title, MAX(developmentcost)

FROM software

GROUP BY name, title

order by developmentcost DESC

LIMIT 1;

19) Which package has the LOWEST selling cost?

SELECT name, title, MIN(softwarecost)

FROM software

GROUP BY name, title

order by softwarecost ASC

LIMIT 1;

20) Who developed the package, which has sold the LEAST number of copies?

SELECT name, title, MIN(sold)

FROM software

GROUP BY name, title

order by sold ASC

LIMIT 1;

21) Which language was used to develop the package WHICH has the HIGEST sales amount?

SELECT name, language\_developed

FROM software

WHERE softwarecost = (

SELECT MAX(softwarecost)

FROM software

);

22) How many copies of the package that has the LEAST DIFFRENCE between development and selling cost were sold?

SELECT name,sold

FROM software

WHERE (softwarecost - developmentcost) = (

SELECT MIN(softwarecost - developmentcost)

FROM software

);

23) Which is the COSTLIEAST package developed in PASCAL?

SELECT \*

FROM software

WHERE language\_developed = 'PASCAL'

ORDER BY developmentcost DESC

LIMIT 1;

24) Which language was used to develop the MOST NUMBER of package?

SELECT

language\_developed,

COUNT(\*) AS num\_packages

FROM

software

GROUP BY

language\_developed

ORDER BY

num\_packages DESC

LIMIT 1;

25) Which programmer has developed the HIGEST NUMBER of package?

SELECT

name,

COUNT(\*) AS num\_packages

FROM

software

GROUP BY

name

ORDER BY

num\_packages DESC

LIMIT 1;

26) Who is the author of the COSTLIEST package?

SELECT \*

FROM

software

ORDER BY developmentcost DESC

LIMIT 1;

27) Display names of packages WHICH have been sold LESS THAN the AVERAGE number of copies? 28) Who are the female programmers earning MORE than the HIGEST paid male programmers?

SELECT name, salary

FROM Programmer

WHERE sex = 'female'

AND salary > (

SELECT MAX(salary)

FROM Programmer

WHERE sex = 'male'

);

29) Which language has been stated as prof1 by MOST of the programmers?

SELECT language1

FROM Programmer

GROUP BY language1

ORDER BY COUNT(\*) DESC

LIMIT 1;

30) Who are the authors of packages, WHICH have recovered MORE THAN double the development cost?

SELECT name

FROM software

WHERE softwarecost > (2 \* developmentcost);

31) Display programmer names and CHEAPEST package developed by them in EACH language?

SELECT

name AS programmer\_name,

language\_developed AS developed\_language,

MIN(developmentcost) AS cheapest\_package\_cost

FROM

software

GROUP BY

name, language\_developed;

32) Who is the YOUNGEST male programmer born in 1965?

SELECT name, STR\_TO\_DATE(dob, '%d-%m-%Y') AS birth\_date

FROM Programmer

WHERE sex = 'male' AND dob LIKE '\_\_\_-\_\_\_-1965'

ORDER BY dob ASC

LIMIT 1;

33) Display language used by EACH programmer to develop the HIGEST selling and LOWEST selling package.

SELECT

name AS programmer\_name,

language\_developed AS language\_used,

'Highest Selling' AS package\_type

FROM

software

WHERE

softwarecost = (SELECT MAX(softwarecost) FROM software)

UNION

SELECT

name AS programmer\_name,

language\_developed AS language\_used,

'Lowest Selling' AS package\_type

FROM

software

WHERE

softwarecost = (SELECT MIN(softwarecost) FROM software);

34) Who is the OLDEST female programmer WHO joined in 1992

SELECT name, STR\_TO\_DATE(dob, '%d-%m-%Y') AS birth\_date

FROM Programmer

WHERE sex = 'female' AND dob LIKE '\_\_\_-\_\_\_-1992'

ORDER BY dob DESC

LIMIT 1;

35) In WHICH year where the MOST NUMBER of programmer born?

SELECT

YEAR(dob) AS birth\_year,

COUNT(\*) AS num\_programmers\_born

FROM

programmer

GROUP BY

YEAR(dob)

ORDER BY

num\_programmers\_born DESC

LIMIT 1;

36) In WHICH month did MOST NUMBRER of programmer join?

SELECT

MONTH(doj) AS join\_month,

COUNT(\*) AS num\_programmers\_joined

FROM

programmer

GROUP BY

MONTH(doj)

ORDER BY

num\_programmers\_joined DESC

LIMIT 1;

37) In WHICH language are MOST of the programmer's proficient?

SELECT language1,language2

FROM Programmer

GROUP BY language1,language2

ORDER BY COUNT(\*) DESC

LIMIT 1;

38) Who are the male programmers earning BELOW the AVERAGE salary of female programmers?

SELECT name, salary

FROM Programmer

WHERE sex = 'male'

AND salary < (

SELECT AVG(salary)

FROM Programmer

WHERE sex = 'female'

);

**Queries-IV**

1)Display the details of THOSE WHO are drawing the same salary

SELECT \*

FROM Programmer

WHERE salary IN (

SELECT salary

FROM Programmer

GROUP BY salary

HAVING COUNT(\*) > 1

);

2) Display the details of software developed by male programmers earning MORE than 3000.

SELECT \*

FROM programmer

WHERE sex = 'male' AND salary >= 3000;

3)Display details of packages developed in PASCAL by female programmers.

SELECT \*

FROM programmer

WHERE sex = 'female' AND (language1 = 'Pascal' OR language2 = 'Pascal');

4)Display the details of the programmer WHO joined BEFORE 1990.

SELECT name,doj

FROM programmer

WHERE doj < '1990-01-01';

5)Display details of software developed in C by female programmers of PRAGATHI.

SELECT p.name, p.sex, s.studies\_place

FROM programmer p

JOIN studies s ON p.name= s.name

WHERE p.sex = 'female' AND s.studies\_place = 'paragathi';

6)Display NUMBER of packages NUMBER of copies sold and sales value of EACH programmer Institute-wise.

SELECT

p.studies\_place,

p.name AS programmer\_name,

COUNT(s.name) AS num\_packages,

SUM(s.sold) AS total\_copies\_sold,

SUM(s.softwarecost \* s.sold) AS total\_sales\_value

FROM

Programmer p

JOIN

software s ON p.name = s.name

GROUP BY

p.studies\_place, p.name;

7) Display details of software developed in DBASE by male programmers WHO belong to the institute on which MOST NUMBER OF programmer’s studies.

SELECT s.\*

FROM software s

JOIN Programmer p ON s.name = p.name

WHERE p.sex = 'male'

AND p.studies\_place= (

SELECT studies\_place

FROM studies

GROUP BY studies\_place

ORDER BY COUNT(\*) DESC

LIMIT 1

)

AND s.language\_developed = 'DBASE';

8) Display the details of the software that was developed by male programmers born BEFORE 1965 and female programmers born AFTER 1975.

SELECT \*

FROM software s

JOIN programmer p ON s.name = p.name

WHERE (p.sex = 'male' AND p.dob < '1965-01-01')

OR (p.sex = 'female' AND p.dob > '1975-01-01');

9) Display the details of the software that was developed in the language that is NOT the programmer’s first proficiency.

SELECT s.name,s.language\_developed, s.softwarecost, s.title

FROM software s

JOIN programmer p ON s.name = p.name

WHERE s.language\_developed <> p.language1 ;

10)Display details of software that was developed in the language which is NEITHER first NOR second proficiency of the programmer.

SELECT s.name,s.language\_developed, s.softwarecost, s.title

FROM software s

JOIN programmer p ON s.name = p.name

WHERE s.language\_developed NOT IN (p.language1, p.language2);

11) Display details of software developed by male students of SABHARI.

SELECT s.\*

FROM software s

JOIN Programmer p ON s.author = p.name

WHERE p.sex = 'male'

AND p.studies\_place = 'SABHARI';

12) Display the names of programmers WHO HAVE NOT developed any package.

SELECT p.name

FROM programmer p

LEFT JOIN software s ON p.name= s.name

WHERE s.name IS NULL;

13) What is the total cost of the software developed by the programmers by APPLE?

SELECT name,title,language\_developed,softwarecost

FROM software

WHERE title = 'APPLE';

14) Who are the programmers WHO JOINED in the same day?

SELECT p1.name, p2.name, p1.doj

FROM programmer p1

JOIN programmer p2 ON p1.doj = p2.doj

WHERE p1.name <> p2.name;

15) Who are the programmers WHO HAVE THE SAME PROF2?

SELECT p1.name, p2.name, p1.language2

FROM programmer p1

JOIN programmer p2 ON p1.language2 = p2.language2

WHERE p1.name <> p2.name;

16)Display the total sales values of software, institutes-wise.

SELECT st.studies\_place, SUM(s.softwarecost) AS total\_sales

FROM software s

JOIN studies st ON s.name = st.name

GROUP BY st.studies\_place;

17)In which institutes did the person who developed the COSTLIEST package study?

SELECT st.studies\_place

FROM studies st

JOIN programmer p ON st.name = p.name

JOIN (

SELECT name

FROM software

WHERE softwarecost = (SELECT MAX(softwarecost) FROM software)

) AS max\_software ON p.name = max\_software.name;

18)Which language listed in prof1 and prof2 HAS NOT BEEN used to develop any package?

SELECT DISTINCT p.language1

FROM programmer p

LEFT JOIN software s ON p.name = s.name

WHERE p.language1 IS NOT NULL AND s.title IS NULL

UNION

SELECT DISTINCT p.language2

FROM programmer p

LEFT JOIN software s ON p.name = s.name

WHERE p.language2 IS NOT NULL AND s.title IS NULL;

19)How much does the person WHO developed the HIGHEST selling package earn and WHAT course did he/she undergo?

SELECT p.name AS programmer\_name, p.salary, st.course

FROM programmer p

JOIN studies st ON p.name = st.name

JOIN (

SELECT name

FROM software

WHERE total\_sales\_value = (SELECT MAX(softwarecost) FROM software)

) AS max\_software ON p.name = max\_software.name;

20) How many months will it take for each programmer to recover the cost of the course underwent?

SELECT

name AS programmer\_name,

course\_cost / (salary / 12) AS months\_to\_recover\_cost

FROM

Programmer;

21) Which is the COSTLIEST package developed by a person with under 3 year’s expenences?

SELECT s.title AS costliest\_package, s.softwarecost

FROM software s

JOIN programmer p ON s.name = p.name

WHERE DATEDIFF(CURRENT\_DATE(), p.doj) < 1095 -- 3 years in days

ORDER BY s.softwarecost DESC

LIMIT 1;

22) What is the AVERAGE salary for those WHOSE software's sales value is more than 50,000?

SELECT AVG(p.salary) AS average\_salary

FROM programmer p

JOIN software s ON p.name= s.name

WHERE s.softwarecost > 50000;

23) How many packages were developed by the students WHO studied in the institute that Charge the LOWEST course fee?

SELECT COUNT(\*) AS package\_count

FROM software s

JOIN studies st ON s.name = st.name

WHERE st.studies\_place = (

SELECT studies\_place

FROM studies

GROUP BY studies\_place

ORDER BY MIN(course\_cost)

LIMIT 1

);

24) How many packages were developed by the person WHO developed the CHEAPEST package? Where did he\she study?

SELECT COUNT(\*) AS package\_count, st.studies\_place AS study\_location

FROM software s

JOIN programmer p ON s.name = p.name

JOIN studies st ON p.name = st.name

WHERE s.softwarecost = (

SELECT MIN(softwarecost)

FROM software

)

GROUP BY st.studies\_place;

25) How many packages were developed by female programmers earning MORE than the HIGHEST paid male programmer?

SELECT COUNT(\*) AS package\_count

FROM software s

JOIN programmer p ON s.name = p.name

WHERE p.sex = 'female'

AND p.salary > (

SELECT MAX(salary)

FROM programmer

WHERE sex = 'male'

);

26) How many packages were developed by the MOST experienced programmers from BDPS?

SELECT COUNT(\*) AS package\_count

FROM software s

JOIN programmer p ON s.name = p.name

JOIN studies st ON p.name = st.name

WHERE st.studies\_place = 'BDPS'

AND TIMESTAMPDIFF(YEAR, p.doj, CURRENT\_DATE()) = (

SELECT MAX(TIMESTAMPDIFF(YEAR, p.doj, CURRENT\_DATE()))

FROM programmer p

JOIN studies st ON p.name= st.name

WHERE st.studies\_place = 'BDPS'

);

27) List the programmers (from software table) and institutes they studied, including those WHO DIDN'T develop any package.

SELECT p.name AS programmer\_name, st.studies\_place AS study\_institute

FROM programmer p

LEFT JOIN studies st ON p.name= st.name;

28) List each profit with the number of programmers having that prof1 and the number of packages developed in that prof1.

SELECT p.language1 AS proficiency,

COUNT(DISTINCT p.name) AS num\_programmers,

COUNT(s.language\_developed) AS num\_packages\_developed

FROM programmer p

LEFT JOIN software s ON p.name = s.name

GROUP BY p.language1;

29) List programmer names (from programmer table) and number of packages EACH developed.

SELECT p.name AS programmer\_name, COUNT(s.name) AS num\_packages\_developed

FROM programmer p

LEFT JOIN software s ON p.name= s.name

GROUP BY p.name;

30) List all the details of programmers who have done a course at S.S.I.L

SELECT \*

FROM studies

WHERE studies\_place = 'S.S.I.L';