

ASSIGNMENT ON SQL

QUERIES – I

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

```
select avg(scost) from Software where dev_in = 'pascal';
```

2) Display the names and ages of all programmers.

```
select name, timestampdiff(year, dob, curdate()) as age from programmer;
```

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

```
select name , timestampdiff(year, dob, curdate()) as age from Programmer where name in  
(select name from Studies where course = 'dcs');
```

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

```
select max(sold) as highest_copies from Software;
```

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

```
select dob, name from programmer where extract(month from dob)=1;
```

6) Display lowest course fee.

```
select min(ccost) as Course_fee from Studies;
```

7) How many programmer has done PGDCA course.

```
select count(name) as Programmer_count from Studies where course='pgdca';
```

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

```
select sum(scost*sold) from software where dev_in like 'basic';
```

9) Display the details of software developed by Ramesh?

```
select * from software where name = 'Ramesh';
```

10) How many programmers studied at SABHARI.

```
select count(name) from studies where splace='sabhari';
```

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

```
select * from software where sold > 20000;
```

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

```
select name, round(dcost / scost) as copies_to_recovercost from Software;
```

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

```
select max(scost) from software where dev_in='basic';
```

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

```
select * from software where (scost*sold) >= dcost;
```

15) How many packages were developed in dbase?

```
select count(title) from software where dev_in='dbase';
```

16) How many programmers studies at paragathi?

```
select count(name) from Studies where splace='paragathi';
```

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

```
select count(name) from studies where ccost>=5000 and ccost<=10000;
```

18) What is the average course fee?

```
select avg(ccost) as avg_cost from studies;
```

19) Display the details of programmers knowing c?

```
select * from Programmer where prof1='c' or prof2='c';
```

20) How many programmers know either Cobol or Pascal?

```
select count(name) from Programmer where prof1='cobol'or prof2='cobol' or  
prof1='pascal' or prof2='pascal';
```

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

```
select count(name) from Programmer where prof1 !='c'and prof2 !='c' and prof1 !='pascal'  
and prof2 !='pascal';
```

22) How old is the oldest male programmers?

```
select max(timestampdiff(year, dob, curdate())) as oldest_male from Programmer where  
sex = 'm';
```

23) What is the average age of female programmers?

```
select avg(timestampdiff(year, dob, curdate())) as average_age from Programmer where  
sex = 'f';
```

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

select name , timestampdiff(year, doj, curdate()) as experience from Programmer order by experience desc;

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

select name from programmer where extract(month from dob) = extract(month from sysdate());

26) How many female programmers are there?

select count(name) as female_programmer from Programmer where sex='f';

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

select name, prof1, prof2 from Programmer where sex='m';

28) What is the Average salary?

select avg(salary) from Programmer;

29) How many people draw 2000 to 4000?

select count(name) from Programmer where salary >= 2000 and salary <= 4000;

30) 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');

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

select count(*) as female_programmers from Programmer where sex = 'f' and timestampdiff(year, dob, curdate()) > 24 and ('C' in (prof1, prof2));

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

select * from programmer where day(dob) between day(curdate()) and day(curdate() + interval 7 day) and month(dob) = month(curdate());

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

select * from programmer where floor((curdate() - doj)/365) < 1;

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

select name from programmer where floor((curdate() - doj)/365) = 2;

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

select (dcost - (scost * sold)), title from Software where (scost * sold) < dcost;

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

select title from software where sold=0;

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

select title,scost from Software where name='Mary';

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

select distinct splace 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 upto 5 characters?

select name from Programmer where length(name)=5;

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

select count(*) as female_programmers from programmer where sex='f' and timestampdiff(year, doj, curdate())>2 and ('cobol' in (prof1,prof2))

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

select min(length(name)) from Programmer;

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

select avg(dcost) from software where dev_in='cobol';

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

select name, sex, date_format(dob, '%d/%m/%y') as dob, date_format(doj, '%d/%m/%y') as doj from Programmer;

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

select name from programmer where(last_day(dob)=day(dob));

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

select salary from Programmer where sex='m' and prof1!='cobol' and prof2!='cobol';

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

select title, scost, dcost, dcost-scost as difference from software order by 4 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 extract(month from dob) = extract(month from doj);

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

select title from software where title like '% %';

QUERIES - II

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

select dev_in as Language,count(title) as No_of_package from Software group by dev_in;

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

select dev_in as Language,count(title) as No_of_package from Software group by name;

3) Display THE NUMBER OF male and female programmer.

select sex, count(name) from Programmer group by sex;

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

select dev-in,max(scost),max(sold) from Software group by dev_in;

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

select year(dob) as birth_year, count(*) as people from programmer group by year(dob) order by birth_year;

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

select year(doj) as joined_year, count(*) as people from programmer group by year(doj) order by joined_year;

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

select month(dob) as birth_month, count(*) as people from programmer group by month(dob) order by birth_month;

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

select month(doj) as joined_month, count(*) as people from programmer group by month(doj) order by joined_month;

9) Display the language wise COUNTS of prof1.

select prof1, count(prof1) from programmer group by prof1;

10) Display the language wise COUNTS of prof2.

```
select prof2, count(prof2) from programmer group by prof2;
```

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

```
select salary, count(name) from programmer group by salary;
```

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

```
select splace, count(name) from studies group by splace;
```

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

```
select course, count(name) from studies group by course;
```

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

```
select dev_in, sum(dcost) as Total_cost from Software group by dev_in;
```

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

```
select dev_in, scost from Software group by dev_in;
```

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

```
select name, dcost from Software group by name;
```

17) Display the sales values of the package developed in EACH programmer.

```
select name, sum(scost*sold) from Software group by name;
```

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

```
select name, count(title) from Software group by name;
```

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

```
select dev_in, sum(scost) from software group by dev_in;
```

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

```
select name, max(dcost), min(dcost) from Software group by name;
```

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

```
select dev_in, avg(dcost), avg(scost), scost from software group by dev_in;
```

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

```
select splace, count(course), avg(ccost) from studies group by splace;
```

23) Display EACH institute name with NUMBER of students.

```
select splace, count(name) as Student from studies group by splace;
```

24) Display names of male and female programmers.

select name,sex from programmer group by sex;

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

select name, title from software group by name;

26) Display the NUMBER of packages in EACH language.

select count(title),dev_in from software group by dev_in;

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

select count(title),dev_in from software where dcost<1000 group by dev_in;

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

select dev_in, avg(dcost-scost) from software group by dev_in;

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

select sum(scost),sum(dcost),sum(dcost-(scost*sold)) from software group by name
having sum(scost*sold)<sum(dcost);

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

select max(salary),min(salary),avg(salary) from programmer where salary > 2000;

QUERIES - III

1) Who is the highest paid C programmer?

select name, max(salary) from programmer where prof1='c' or prof2='c'group by name;

2) Who is the highest paid female cobol programmer?

select name, max(salary) from programmer where (prof1='cobol' or prof2='cobol') and sex='f';

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

select name, max(salary),prof1 from programmer group by prof1;

4) Who is the LEAST experienced programmer?

select name from programmer order by doj limit 1;

5) Who is the MOST experienced programmer?

select name from programmer order by doj desc limit 1;

6) Which language is known by ONLY ONE programmer?

```
select language from (select prof1 as language from programmer union all select prof2 as language from programmer) as languageknown group by language having count(*)=1;
```

7) Who is the YONGEST programmer knowing DBASE?

```
select name from programmer where prof1='dbase' or prof2='dbase' order by dob asc limit 1;
```

8) Which institute has MOST NUMBER of students?

```
select course, count(*) as students from Studies group by course order by students desc limit 1;
```

9) Who is the above programmer?

```
select p.name as programmer_name from Programmer p inner join Studies s on p.name = s.name where s.splace = (select splace from Studies group by splace order by count(*) desc limit 1);
```

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

```
select * from programmer where sex='f' and salary>3000 and (prof1 not in('c','c++','oracle','dbase') or prof2 not in('c','c++','oracle','dbase'));
```

11) Which is the COSTLIEST course?

```
select course, ccost from studies where ccost=(select max(ccost) from studies);
```

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

```
select course, count(*) as students from Studies group by course order by students desc limit 1;
```

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

```
select splace, course from studies where ccost < (select avg(ccost) from studies);
```

14) Which institute conducts COSTLIEST course?

```
select splace,ccost from studies where ccost=(select max(ccost) from studies);
```

15) Which course has below AVERAGE number of students?

```
select course, count(*) as students from Studies group by course having count(*) < (select avg(students) from (select count(*) as students from Studies group by course) as avg_students);
```

16) Which institute conducts the above course?


```
select splace, course, count(*) as students from Studies group by splace, course having
count(*) < (select avg(students) from (select count(*) as students from Studies group by course)
as avg_students);
```

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

```
select course from studies where ccost<(select avg(ccost)+1000 from studies) and
ccost>(select avg(ccost)-1000 from studies);
```

18) Which package has the HIGEST development cost?

```
select title, max(dcost) from software;
```

19) Which package has the LOWEST selling cost?

```
select title, min(scost) from software;
```

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

```
select name,sold from software where sold=(select min(sold) from software);
```

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

```
select dev_in ,scost from software where scost=(select max(scost) from software);
```

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

```
select title, sold from software where (dcost-scost)=(select min(dcost-scost) from
software);
```

23) Which is the COSTLIEAST package developed in PASCAL?

```
select title, dcost from software where dcost=(select max(dcost) from software where
dev_in='pascal');
```

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

```
select max(dev_in) from software group by dev_in;
```

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

```
select max(name) from software;
```

26) Who is the author of the COSTLIEST package?

```
select name,dcost from software where dcost=(select max(dcost) from software);
```

27) Display names of packages WHICH have been sold LESS THAN the AVERAGE number of copies?

```
select title from software where sold<(select avg(sold) from software);
```

28) Who are the female programmers earning MORE than the HIGEST paid male programmers?

```
select name from programmer where sex='f' and salary>(select max(salary) from programmer where sex='m');
```

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

```
select prof1 from programmer group by prof1 having prof1=(select max(prof1) from programmer);
```

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

```
select name from software where scost*sold>2*dcost;
```

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

```
select name,title from software where dcost=(select min(dcost) from software group by dev_in);
```

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

```
select name from Programmer where sex = 'm' and dob = (select min(dob) from Programmer where sex = 'm' and year(dob) = 1965);
```

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

```
select name, dev_in from Software where sold in (select max(sold) from Software group by name) union select name, dev_in from Software where sold in (select min(sold) from Software group by name);
```

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

```
select name from Programmer where sex = 'f' and year(doj) = 1992 OR 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 programmers from Programmer group by year(dob) order by count(*) desc limit 1;
```

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

```
select month(doj) as join_month, count(*) as programmers_joined from Programmer group by month(doj) order by count(*) desc limit 1;
```

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

```
select prof1, count(*) as programmers from Programmer group by prof1 order by count(*)  
desc limit 1;
```

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

```
select name from programmer where sex='m' and salary<(select avg(salary) from  
programmer where sex='f');
```

QUERY - IV

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

```
select name, salary from programmer where salary = (select salary from programmer pro  
group by salary having salary=pro.salary );
```

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

```
select * from programmer, software where programmer.name=software.name and  
salary>3000 and sex='m';
```

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

```
select * from programmer,software where programmer.name=software.name and sex='f'  
and dev_in='pascal';
```

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

```
select * from programmer where year(doj)<1990;
```

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

```
select * from software,studies ,programmer where software.name=studies.name and  
programmer.name=software.name and sex='f' and splace='pragathi';
```

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

```
Select      studies.splace,      count(software.dev_in),      count(software.sold),  
sum(software.sold*software.scost) from software,studies where software.name=studies.name  
group by studies.splace;
```

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 * from Software join Programmer on software.name = programmer.name join  
Studies on programmer.name = studies.name join (select splace from Studies group by splace order  
by count(*) desc limit 1) as most_studied_institute on studies.splace =  
most_studied_institute.splace where programmer.sex = 'm' and software.dev_in = '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 join Programmer on software.name = programmer.name where  
(programmer.sex = 'm' and programmer.dob < '1965-01-01') or (programmer.sex = 'f' and  
programmer.dob > '1975-12-31');
```

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

```
select distinct * from software, programmer where software.name = programmer.name and  
programmer.prof1 != software.dev_in;
```

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

```
select * from programmer,software where software.name=programmer.name and  
(dev_in!=prof1 and dev_in!=prof2);
```

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

```
select * from programmer,software,studies where programmer.name=software.name and  
software.name=studies.name and sex='m' and splace='sabhari';
```

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

```
select name from programmer where name not in (select name from software);
```

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

```
select sum(scost) from software,studies where software.name=studies.name and  
splace='apple';
```

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

```
select p1.name,p2.name,p1.doj from programmer p1,programmer p2 where p1.doj=p2.doj  
and p1.name < p2.name;
```

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

```
select name from programmer where prof2 = (select prof2 from programmer );
```

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

```
select studies.splace,sum(software.sold*software.scost) from software,studies where  
studies.name=software.name group by studies.splace;
```

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

```
select splace from software ,studies where software.name=studies.name group by splace  
having max(dcost)=(select max(dcost) from software);
```

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

```
select prof1 from programmer where prof1 not in(select dev_in from software) union select
prof2 from programmer where prof2 not in(select dev_in from software);
```

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

```
select programmer.name as name, programmer.salary as salary, studies.course as course
from Programmer join Software on programmer.name = software.name join Studies on
programmer.name = studies.name where software.sold = (select max(sold) from Software);
```

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

```
select programmer.name as name, studies.course as course, studies.ccost as course_cost,
programmer.salary as salary, round(studies.ccost / programmer.salary, 2) as months_to_recover
from Programmer join Studies on programmer.name = studies.name;
```

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

```
select title from Software where scost = (select max(scost) from Software where name in
(select name from Programmer where timestampdiff(year, doj, curdate()) < 3));
```

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

```
select avg(salary) from programmer,software where programmer.name=software.name
and sold*scost>50000;
```

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

```
select count(software.name) from software,studies where software.name=studies.name
group by software.name having min(ccost)=(select min(ccost) from studies);
```

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

```
select count(*),studies.splace from programmer ,software,studies where
software.name=programmer.name and programmer.name=studies.name group by dev_in having
min(dcost)=(select min(dcost) from software);
```

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

```
select count(dev_in) from programmer ,software where
software.name=programmer.name and sex='f' and salary>(select max(salary) from programmer,
software where software.name=programmer.name and sex='m');
```

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

```
select count(*) as packages from Software where name in (select name from Programmer
where timestampdiff(year, doj, curdate()) = (select max(timestampdiff(year, doj, curdate())) from
Programmer where prof1 = 'bdps' or prof2 = 'bdps'));
```

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

```
select programmer.name as programmer, ifnull(studies.splace, 'No Institute') as institute
from Programmer left join Studies on programmer.name = studies.name;
```

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

```
select prof1 as profession, count(distinct programmer.name) as programmers,
count(software.title) as packages from Programmer left join Software on programmer.name =
software.name group by prof1;
```

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

```
select software.name, count(dev_in) from programmer, software where
programmer.name=software.name ;
```

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

```
select * from Programmer join Studies on programmer.name = studies.name where
studies.splace = 'S.S.I.L';
```