

SQL QUERIES

QUERIES – I

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

```
select avg(scost) as Average_Cost from software where dev_in = "pascal"
```

2) Display the names and ages of all programmers.

```
select name as name, floor(datediff(current_date(), dob)/365) as age from programmer;
```

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

```
select name from studies where course like 'dap';
```

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

```
select max(sold) as Highest_number_of_copies from software;
```

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

```
select dob, name from programmer where to_char(dob, 'mon') like 'jan';
```

6) Display lowest course fee.

```
select min(ccost) as Lowest_cost_fee from studies;
```

7) How many programmer has done PGDCA course.

```
select count(name) from studies where course like 'pgdca';
```

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

```
select sum(sold*scost) as Income from software where dev_in like 'c';
```

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) as number_of_programmers from studies where splace='sabhari';
```

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

```
select * from software where (sold*scost)>20000;
```

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

```
select title, ceil(dcost/scost) as copies_to_recover from software;
```

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

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

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

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

15) How many packages were developed in dbase?

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

16) How many programmers studies at paragathi?

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

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

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

18) What is the average course fee?

```
select avg(ccost) as Average_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) as programmers from programmer where prof1 in ('cobol','pascal') or  
prof2 in ('cobol','pascal');
```

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

```
select count(name) as programmers from programmer where prof1 not in ('c','pascal') and  
prof2 not in ('c','pascal');
```

22) How old is the oldest male programmers?

```
select max(timestampdiff(year,dob,now())) as oldest_male_programmer from programmer  
where sex = 'm';
```

23) What is the average age of female programmers?

```
select avg(timestampdiff(year,dob,now())) 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,now()) 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 month(dob)=month(current_date());
```

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 distinct prof1 as languages from programmer where sex='m'  
union select distinct prof2 from programmer where sex='m';
```

28) What is the Average salary?

```
select avg(salary) as Average_salary from programmer;
```

29) How many people draw 2000 to 4000?

```
select name from programmer where salary between 2000 and 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(name) as female_programmer from programmer where sex='f' and (prof1='c' or  
prof2='c') and timestampdiff(year,dob,current_date())>24;
```

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

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

```
select * from programmer where timestampdiff(year,dof,current_date())<1;
```

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

```
select * from programmer where timestampdiff(year,dof,current_date())=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 as not_sold from software where sold=0;
```

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

```
select title, scost as software_cost from software where name='mary';
```

38) Display the institutes 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 name from programmer where timestampdiff(year,dob,current_date())>2 and sex='f' and (prof1='cobol' or prof2='cobol');
```

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

```
select min(length(name)) as shorter_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 , concat(day(dob),"/",month(dob),"/",right(year(dob),2))as dob, concat(day(doj),"/",month(doj),"/",year(doj)) as doj from programmer;
```

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

```
select name, dob from programmer where last_day(dob) = 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' or 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 difference desc;
```

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

```
select name,dob,dob from programmer where month(dob)=month(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_pack from software group by dev_in;
```

- 2) Display THE NUMBER OF packages developed by EACH person.
select name,count(title) as no_of_pack 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 year,count(name) as count from programmer group by year(dob);
- 6) Display THE NUMBER OF people JOINED in EACH YEAR.
select year(doj) as year,count(name) as name from programmer group by year(doj);
- 7) Display THE NUMBER OF people BORN in EACH MONTH.
select month(dob) as month,count(name) as name from programmer group by month(dob);
- 8) Display THE NUMBER OF people JOINED in EACH MONTH.
select month(doj) as month,count(name) as name from programmer group by month(doj);
- 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) as count from programmer group by prof2;
- 11) Display THE NUMBER OF people in EACH salary group.
select salary,count(name) as count from programmer group by salary;
- 12) Display THE NUMBER OF people who studied in EACH institute.
select splace,count(name) as count from studies group by splace;
- 13) Display THE NUMBER OF people who studied in EACH course.
select course,count(name) as count from studies group by course;
- 14) Display the TOTAL development COST of the packages developed in EACH language.
select dev_in as language,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 as language ,sum(scost) as selling_cost from software group by dev_in;
- 16) Display the cost of the package developed by EACH programmer.
select name,sum(dcost) as total_cost from software group by name;

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

select name, sum(scost*sold) as sales from software group by name;

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

select name, count(title) as total_pack 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, cheapest packages developed by His/Her?

select name, max(dcost) as costliest_package, min(dcost) 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 dev_in as language, avg(dcost) as average_dcost, avg(scost) as average_selling_cost, avg(scost/sold) as Average_price_per_copy from software group by dev_in;

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

select splace as Institute, count(course) as Number_of_courses, avg(ccost) as Average_cost_per_course from studies group by splace;

23) Display EACH institute name with NUMBER of students.

select splace as Institute, count(name) as no_of_student from studies group by splace;

24) Display names of male and female programmers.

select name, sex from programmer order by sex;

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

select name, title from software order by name;

26) Display the NUMBER of packages in EACH language.

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

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

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

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

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

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

```
select name, sum(scost) as Total_scost, sum(dcost) as Total_dcost, sum(dcost-(sold*scost))  
as amount_to_be_recovered from software group by name having  
sum(dcost)>sum(sold*scost);
```

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

```
select max(salary) as max_salary, min(salary) as min_salary, avg(salary) as average_salary  
from programmer where salary > 2000;
```

QUERIES – III

1) Who is the highest paid C programmer?

```
select * from programmer where salary=(select max(salary) from programmer where prof1  
like 'c' or prof2 like 'c');
```

2) 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 sex like 'f';
```

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

```
select distinct name, salary, prof1 from programmer where (salary,prof1) in (select  
max(salary),prof1 from programmer group by prof1);
```

4) Who is the LEAST experienced programmer?

```
select name, timestampdiff(year,dob,current_date()) as experience from programmer order by  
experience limit 1;
```

5) Who is the MOST experienced programmer?

```
select name, timestampdiff(year,dob,current_date()) as experience from programmer order by  
experience desc limit 1;
```

6) Which language is known by ONLY ONE programmer?

```
select dev_in as language, count(dev_in) as count from software group by language having  
count=1;
```

7) Who is the YONGEST programmer knowing DBASE?

```
select name, timestampdiff(year,dob,current_date()) as age from programmer where  
(prof1="dbase" or prof2="dbase") order by age limit 1;
```

8) Which institute has MOST NUMBER of students?

```
select splace, count(name) as no_of_students from studies group by splace order by  
no_of_students desc limit 1;
```

//9) Who is the above programmer?

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(name) as count from studies group by course order by course desc limit 1;
```

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

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

14) Which institute conducts COSTLIEST course?

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

15) Which course has below AVERAGE number of students?

```
select course from studies group by course having count(*) < (select avg(count(*)) from studies group by course);
```

16) Which institute conducts the above course?

```
select splace from studies where course in (select course from studies group by course having count(name) < (select avg(count(name)) from studies group by course));
```

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

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

18) Which package has the HIGHEST development cost?

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

19) Which package has the LOWEST selling cost?

```
select title,scost from software where scost = (select 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 sold,title from software order by (scost - dcost) limit 1;

23) Which is the COSTLIEAST package developed in PASCAL?

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

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

select dev_in as language, count(title) as count from software group by dev_in having max(dev_in) = (select max(dev_in) from software);

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

select name, count(title) from software group by name order by count(title) desc limit 1;

26) Who is the author of the COSTLIEST package?

select name,scost from software order by scost desc limit 1;

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, salary 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 sold*scost > 2*dcost;

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

select name,dev_in, min(scost) as cheapest_package from software group by name, dev_in;

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

select name, dob from programmer where sex="m" and year(dob)=1965 order by month(dob) limit 1;

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, doj from programmer where sex='f' and year(doj)=1992 order by month(doj) limit 1;
```

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

```
select year(dob) as year, count(*) as count from programmer group by year order by count desc limit 1;
```

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

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

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

```
select dev_in as language, count(*) as no_of_programmer from software group by dev_in 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 = 'm' and salary < (select(avg(salary))from programmer where sex = 'f');
```

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 earing more than 3000.

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

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

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

4) Display the details of these 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 s.* from software s, studies st, programmer p where s.name=st.name and  
p.name=s.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 programmers studies.

```
select st.name, p.sex, s.dev_in, st.splace, s.sold, s.scost from software s  
join programmer p on s.name=p.name  
join studies st on p.name = st.name  
where st.splace = (select splace from studies group by splace order by count(*) desc limit 1)  
and  
p.sex='m' and s.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 s.* from software s, programmer p  
where (p.sex='m' and year(dob)<1965) or (p.sex='f' and year(dob)>1975);
```

9) Display the details of the software that was developed in the language that is not the programmers first proficiency.

```
select distinct s.* from software s  
inner join programmer p on s.name=p.name  
where s.dev_in not in (p.prof1);
```

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

```
select distinct s.* from software s  
inner join programmer p on s.name=p.name  
where s.dev_in not in (p.prof1, p.prof2);
```

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

```
select distinct s.* from software s  
join studies st on s.name=st.name  
join programmer p on p.name=st.name  
where p.sex='m' and st.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 s
join studies st on s.name=st.name
where st.splace='apple';
```

14) Who are the programmers who joined in the same day?

```
select a.name,a.doj from programmer a,programmer b
where a.doj=b.doj and a.name <> b.name;
```

15) Who are the programmers who have the same prof2?

```
select a.name,a.prof2, b.name,b.prof2
from programmer a,programmer b
where a.prof2=b.prof2 and a.name <> b.name;
```

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

```
select st.splace,sum(s.sold*s.scost) from software s
join studies st on st.name=s.name
group by st.splace;
```

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

```
select st.splace from software s
join studies st on s.name=st.name
group by splace,dcost 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 p.salary,st.course from programmer p,software s,studies st
where p.name=s.name and s.name=st.name and scost=(select max(scost) from software);
```

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

```
select p.name,ceil(ccost/salary) from programmer p,studies s where s.name=p.name;
```

21) Which is the costliest package developed by a person with under 3 years experience?

```
select title as CostliestPackage from software
```

where name in (select name from programmer where (year(current_date()) - year(doj)) < 3)
order by scost desc limit 1;

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

```
select avg(salary) from programmer p,software s  
where p.name=s.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(s.name) from software s,studies st where s.name=st.name group by s.name,ccost  
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(*) from programmer p,software s where s.name=p.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) as no_packages from programmer p  
join software s on s.name=p.name  
where p.sex='f' and p.salary>(select max(salary) from programmer where sex='m');
```

26) How many packages were developed by the most experienced programmers from bdps.

```
select count(*)  
from software s,programmer p  
where p.name=s.name group by doj having max(doj)=(select max(doj)  
from studies st,programmer p, software s  
where p.name=s.name and st.name=p.name and (splace='bdps'));
```

27) List the programmers (from software table) and institutes they studied, including those who didn't develop any package.

```
select name,splace from studies where name not in(select name from software);
```

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

```
select count(*),sum(scost*sold-dcost) "profit" from software where dev_in in (select prof1  
from programmer) group by dev_in;
```

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

```
select s.name,count(dev_in) from programmer p  
join software s on p.name=s.name  
group by s.name;
```

30) List all the details of programmers who has done a course at s.s.i.l.

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