RELATIONAL DATA BASE MANAGEMENT SYSYTEM

(My-Sql)   **B.Bharani kumar -INTOO875**

1) Table Name	Programmer		
name	not null	varchar2(8)	name
dob	not null	date	date of birth
doj	not null	date	date of joining
sex	not null	varchar2(1)	male/ female
prof1		varchar2(8)	known language 1
prof2		varchar2(8)	known language 2
salary	not null	number(4)	salary

Sample Data						
somdutt	21-Apr-66	21-Apr-92	m	pascal	basic	3200

create table Programmer(p_name varchar(8),

DOB date,

DOJ date,

SEX varchar(1),

PROF1 varchar(8),

PROF2 varchar(8),

SALARY integer);

INSERT INTO programmer(p_name,dob,doj,sex,prof1,prof2,salary) values

('ANAND','1966-04-12','1992-04-21','M','PASCAL','BASIC',3200),

('ALTAF','1964-07-02','1990-11-13','M','CLIPPER','COBOL',2800),

('JULIANA','1960-01-31','1990-04-21','F','COBOL','DBASE',3000),

('KAMALA','1968-10-30','1992-01-02','F','C','DBASE',2900),

('MARY','1970-06-24','1991-02-01','F','CPP','ORACLE',4500),

('NELSON','1985-09-11','1989-03-11','M','COBOL','DBASE',2500),

('PATTRICK','1965-11-10','1990-04-21','M','PASCAL',NULL,2800),

('QADIR','1965-08-31','1990-04-21','M','ASSEMBLY','C',3000),

('RAMESH','1967-05-03','1991-02-26','M','PASCAL','DBASE',3200),

('REBECCA','1967-01-01','1990-12-01','F','BASIC','COBOL',2500);

select * from Programmer;

p_name	dob	doj	sex	prof1	prof2	salary
ANAND	1966-04-12	1992-04-21	M	PASCAL	BASIC	3200
ALTAF	1964-07-02	1990-11-13	M	CLIPPER	COBOL	2800
JULIANA	1960-01-31	1990-04-21	F	COBOL	DBASE	3000
KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
MARY	1970-06-24	1991-02-01	F	CPP	ORACLE	4500

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2) Table Name	Software		
name	not null	varchar2(8)	name
title	not null	varchar2(20)	developed project name
dev_in	not null	varchar2(8)	language developed
scost		number(7,2)	software cost
dcost		number(5)	development cost
sold		number(3)	number of software sold

Sample Data					
somdutt	parachutes	basic	399.95	6000	43

create table Software(p_name varchar(8),

TITLE varchar(20),

DEV_IN varchar(8),

SCOST numeric(7,2),

DCOST integer(5),

SOLD integer(4));

insert into Software (p_name, title, dev_in, scost, dcost, sold) values

('MARY', 'README', 'CPP', 100.00, 1200, 84),

('ANAND', 'PARACHUTES', 'BASIC', 399.95, 6000, 43),

('ANAND', 'VIDEOTITLING', 'PASCAL', 7500.00, 16000, 9),

('JULIANA', 'INVENTORY', 'COBOL', 3000.00, 3500, 0),

('KAMALA', 'PAYROLLPRG', 'DBASE', 9000.00, 20000, 7),

('MARY', 'FINANCIALACC', 'ORACLE', 18000.00, 85000, 4),

('MARY', 'CODEGENRRATOP', 'C', 4500.00, 20000, 23),

('PATTRICK', 'README', 'CPP', 300.00, 1200, 84),

('QADIR', 'BOMBSAWAY', 'ASSEMBLY', 750.00, 5000, 11),

('QADIR', 'VACCINES', 'C', 1900.00, 3400, 21),

('RAMESH', 'HOTLIMGMT', 'DBASE', 12000.00, 35000, 4),

('RAMESH', 'DEADLEE', 'PASCAL', 599.95, 4500, 73),

('REMITHA', 'PCUTILITIES', 'C', 725.00, 5000, 51),

('REMITHA', 'TSRHELPPKG', 'ASSEMBLY', 2500.00, 6000, 7),

('REVATHI', 'HOSPITALMGMT', 'PASCAL', 1100.00, 75000, 2),

('VIJAYA', 'TSREDITOR', 'C', 900.00, 700, 6);

select * from Software;

p_name	TITLE	DEV_IN	SCOST	DCOST	SOLD
MARY	README	CPP	100.00	1200	84
ANAND	PARACHUTES	BASIC	399.95	6000	43
ANAND	VIDEOTITLING	PASCAL	7500.00	16000	9
JULIANA	INVENTORY	COBOL	3000.00	3500	0
KAMALA	PAYROLLPRG	DBASE	9000.00	20000	7

****

3) Table Name	Studies		
name	not null	varchar2(8)	name
splace	not null	varchar2(9)	studies place
course	not null	varchar2(5)	course studies
ccost	not null	varchar2(5)	course cost

Sample Data			
somdutt	sabhari	pgdca	4500
devdutt	bdps	dcs	5000

create table Studies(s_name varchar(8),

SPLACE varchar(8),

COURSE varchar(8),

COST integer(5));

insert into Studies (s_name, splace, course, cost) values

('ANAND', 'SABHARI', 'PGDCA', 4500),

('ALTAF', 'COIT', 'DCA', 7200),

('JULIANA', 'BITS', 'MCA', 22000),

('KAMALA', 'PRAGATHI', 'DCP', 5000),

('MARY', 'SABHARI', 'PGDCA', 4500),

('NELSON', 'PRAGATHI', 'DAP', 6200),

('PATRICK', 'PRAGATHI', 'DCAP', 5200),

('QADIR', 'APPLE', 'HDCP', 14000),

('RAMESH', 'SABHARI', 'PGDCA', 4500),

('RESECCA', 'BRILL', 'DCAP', 11000),

('REMITHA', 'BDPS', 'DCS', 6000),

('VIJAYA', 'BDPS', 'DCA', 48000);

select * from Studies;

s_name	SPLACE	COURSE	COST
ANAND	SABHARI	PGDCA	4500
ALTAF	COIT	DCA	7200
JULIANA	BITS	MCA	22000
KAMALA	PRAGATHI	DCP	5000
MARY	SABHARI	PGDCA	4500

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QUERIES - I

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

select avg(scost)

from Software where dev_in="pascal";

avg(scost)
3066.650000

2) Display the names and ages of all programmers.

select p_name,dob,floor(datediff(curdate(),dob)/365.25) as age

from Programmer;

p_name	dob	age
ANAND	1966-04-12	56
ALTAF	1964-07-02	58
JULIANA	1960-01-31	63
KAMALA	1968-10-30	54
MARY	1970-06-24	52

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

select s_name from studies

where course="DCS";

s_name
REMITHA

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

select name,dob

from programmer

where month(dob)="01";

max(sold)
84

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

select p_name,dob

from programmer

where month(dob)="01";

p_name	dob
JULIANA	1960-01-31
REBECCA	1967-01-01

6) Display lowest course fee.

select min(cost)

from studies;-- 6

min(cost)
4500

7) How many programmer has done PGDCA course.

select count(name)

from studies where course="pgdca";

count(s_name)
3

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

select p_name,(sold*scost) as revenue

from software;

p_name	revenue
MARY	8400.00
ANAND	17197.85
ANAND	67500.00
JULIANA	0.00
KAMALA	63000.00

9) Display the details of software developed by Ramesh?

select dev_in from software

where p_name="Ramesh";

	dev_in
▶	DBASE
	PASCAL

10) How many programmers studied at SABHARI.

select count(s_name)

from studies

where splace="Sabhari";

	count(s_name)
▶	3

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

select * from software

where (sold*scost)>20000;-- 11

	p_name	TITLE	DEV_IN	SCOST	DCOST	SOLD
▶	ANAND	VIDEOTITLING	PASCAL	7500.00	16000	9
	KAMALA	PAYROLLPRG	DBASE	9000.00	20000	7
	MARY	FINANCIALACC	ORACLE	18000.00	85000	4
	MARY	CODEGENRRATOP	C	4500.00	20000	23
	PATTRICK	README	CPP	300.00	1200	84

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

select p_name,(dcost/scost)as copies

from software where sold*scost<dcost;-- 12

	p_name	copies
▶	JULIANA	1.1667
	MARY	4.7222
	REVATHI	68.1818

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

select dev_in,max(dcost) from software

where dev_in="basic";

dev_in	max(dcost)
▶ BASIC	6000

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

select * from software

where dcost<sold*scost;-- 14

	p_name	TITLE	DEV_IN	SCOST	DCOST	SOLD
▶	MARY	README	CPP	100.00	1200	84
	ANAND	PARACHUTES	BASIC	399.95	6000	43
	ANAND	VIDEOTITLING	PASCAL	7500.00	16000	9
	KAMALA	PAYROLLPRG	DBASE	9000.00	20000	7
	MARY	CODEGENRRATOP	C	4500.00	20000	23

15) How many packages were developed in dbase?

select count(p_name) from software

where dev_in="dbase";-- 15

count(p_name)
▶ 2

16) How many programmers studies at paragathi?

select count(s_name) from studies

where splace="pragathi";-- 16

count(s_name)
▶ 3

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

select count(s_name) from studies

where 5000<=cost and cost<10000;-- 17

count(s_name)
▶ 5

18) What is the average course fee?

select avg(cost)

from studies;-- 18

avg(cost)
▶ 11508.3333

19) Display the details of programmers knowing c?

select * from programmer

where prof1="c" or prof2="c";-- 19

	p_name	dob	doj	sex	prof1	prof2	salary
▶	KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
	QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000
	KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
	QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000

20) How many programmers know either Cobol or Pascal?

select count(name)

from programmer where prof1="cobol" or prof1="pascal" or prof2="cobol" or prof2="pascal";-- 20

	p_name	dob	doj	sex	prof1	prof2	salary
▶	KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
	QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000
	KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
	QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000

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";-- 21

	p_name	dob	doj	sex	prof1	prof2	salary
▶	KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
	QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000
	KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
	QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000

22) How old is the oldest male programmers?

select max(floor(datediff(curdate(),dob)/365.25))

from programmer where sex="m";-- 22

p_name	dob	doj	sex	prof1	prof2	salary
KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000
KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000

23) What is the average age of female programmers?

select avg(floor(datediff(curdate(),dob)/365.25)) from programmer

where sex="f";-- 23

avg(floor(datediff(curdate(),dob)/365.25))
56.2500

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

select p_name,floor(datediff(curdate(),doj)/365.25) as experience

from programmer

order by experience desc;-- 24

p_name	experience
NELSON	33
NELSON	33
ALTAF	32
JULIANA	32
MARY	32

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

select p_name from programmer

where month(dob)=curdate();-- 25 (outputnone)

p_name

26) How many female programmers are there?

select count(p_name) from programmer

where sex="f";-- 26

count(p_name)
8

27) What are the languages known by the male programmers?
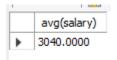
select prof1,prof2 from programmer

where sex="m";-- 27

prof1	prof2
PASCAL	BASIC
CLIPPER	COBOL
COBOL	DBASE
PASCAL	NULL
ASSEMBLY	C
PASCAL	DBASE

28) What is the Average salary?

select avg(salary)

from programmer;-- 28

avg(salary)
3040.0000

29) How many people draw 2000 to 4000?

select count(p_name) from programmer

where salary=2000<salary and 4000>salary ;-- 29

count(p_name)
18

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

select * from programmer

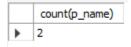where prof1!="pascal"and prof1!="cobol"and prof1!="clipper" and

    prof2!="pascal"and prof2!="cobol"and prof2!="clipper";-- 30

p_name	dob	doj	sex	prof1	prof2	salary
KAMALA	1968-10-30	1992-01-02	F	C	DBASE	2900
MARY	1970-06-24	1991-02-01	F	CPP	ORACLE	4500
QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000
KAMALA	1968-10-30	1992-01- 1990-04-21 C			DBASE	2900
MARY	1970-06-24	1991-02-01	F	CPP	ORACLE	4500
QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000

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

select count(p_name) from programmer

where 24<floor(datediff(curdate(),dob)/365.25) and (prof1="c" or prof2="c") and sex="f";-- 31

count(p_name)
2

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

select p_name

from programmer where week(dob)=curdate();-- 32 (outputnone)

p_name

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

select p_name

from programmer where 1>floor(datediff(curdate(),doj));-- 33

p_name

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

select p_name

from programmer where 2=floor(datediff(curdate(),doj));-- 34

p_name

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

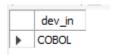select *,(dcost-(sold*scost)) as recovery from software

where dcost>sold*scost;-- 35

p_name	TITLE	DEV_IN	SCOST	DCOST	SOLD	recovery
JULIANA	INVENTORY	COBOL	3000.00	3500	0	3500.00
MARY	FINANCIALACC	ORACLE	18000.00	85000	4	13000.00
REVATHI	HOSPITALMGMT	PASCAL	1100.00	75000	2	72800.00

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

select dev_in from software

where sold=0;-- 36

dev_in
▶ COBOL

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

select p_name,dcost from software

where p_name="mary";-- 37

p_name	dcost
▶ MARY	1200
MARY	85000
MARY	20000

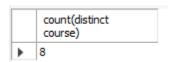## 38) Display the institute's names from the studies table without duplicates?

select distinct splace from studies;-- 38

splace
▶ SABHARI
COIT
BITS
PRAGATHI
APPLE
BRILL

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

select count(distinct course) from studies;-- 39

count(distinct course)
▶ 8

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

select p_name FROM programmer WHERE p_name REGEXP '.*A.*A';-- 40

p_name
ANAND
ALTAF
JULIANA
KAMALA
ANAND
ALTAF

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

select p_name from programmer where length(p_name)<=5;-- 41

p_name
ANAND
ALTAF
MARY
QADIR
ANAND
ALTAF

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

select count(p_name) from programmer

where floor(datediff(curdate(),doj))>2 and sex="f" and (prof1="cobol");-- 42\

count(p_name)
2

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

select min(length(p_name)) from programmer;-- 43

min(length(p_name))
4

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

select avg(dcost)

from software where dev_in="cobol";-- 44

avg(dcost)
3500.0000

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

SELECT

  p_name,

  sex,

  CONCAT(DAY(dob), '/', MONTH(dob), '/',(YEAR(dob))) AS dob,

  CONCAT(DAY(doj), '/', MONTH(doj), '/', (YEAR(doj))) AS doj
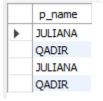
FROM programmer;-- 45

p_name	sex	dob	doj
ANAND	M	12/4/1966	21/4/1992
ALTAF	M	2/7/1964	13/11/1990
JULIANA	F	31/1/1960	21/4/1990
KAMALA	F	30/10/1968	2/1/1992
MARY	F	24/6/1970	1/2/1991
NELSON	M	11/9/1985	11/3/1989

Result 62 ∨

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

select p_name

from programmer where last_day(dob)=dob;-- 46

p_name
JULIANA
QADIR
JULIANA
QADIR

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

select p_name,salary from programmer

where sex="m" and "cobol" not in (prof1,prof2);-- 47

p_name	salary
ANAND	3200
QADIR	3000
RAMESH	3200
ANAND	3200
QADIR	3000
RAMESH	3200

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;-- 48

title	scost	dcost	difference
HOSPITALMGMT	1100.00	75000	73900.00
FINANCIALACC	18000.00	85000	67000.00
HOTLIMGMT	12000.00	35000	23000.00
CODEGENRRATOP	4500.00	20000	15500.00
PAYROLLPRG	9000.00	20000	11000.00
VIDEOTITLING	7500.00	16000	8500.00

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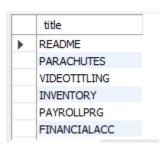
select p_name,dob,doj

from programmer

where month(dob)=month(doj);-- 49

p_name	dob	doj
ANAND	1966-04-12	1992-04-21
ANAND	1966-04-12	1992-04-21

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

select title from software

where length(title)>1;-- 50

title
README
PARACHUTES
VIDEOTITLING
INVENTORY
PAYROLLPRG
FINANCIALACC

QUERY SET2:

1) Display THE NUMBER OF packages developed in EACH language

select dev_in, count(*) as number_of_packages

from software

group by dev_in;

dev_in	number_of_packages
ASSEMBLY	2
BASIC	1
C	4
COBOL	1
CPP	2
DBASE	2
ORACLE	1
PASCAL	3

2) Display THE NUMBER OF packages developed by EACH person

select p_name, count(*) as numberdev

from software

group by p_name;

name	numberdev
ANAND	2
JULIANA	1
KAMALA	1
MARY	3
PATTRICK	1
QADIR	2
RAMESH	2
REMITHA	2
REVATHI	1
VIJAYA	1

3) Display THE NUMBER OF male and female programmer.

select sex, count(*) as total

from programmer

group by sex;

sex	total
F	4
M	6

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

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

select year(dob),count(*)

from programmer group by year(dob);-- 5

year(dob)	count(*)
1960	1
1964	1
1965	2
1966	1
1967	2
1968	1
1970	1
1985	1

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

select year(doj),count(*)

from programmer group by year(doj);-- 6

year(doj)	count(*)
1989	1
1990	5
1991	2
1992	2

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

select month(dob),count(*)

from programmer group by month(dob);-- 7

month(dob)	count(*)
1	2
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1

8) Display THE NUMBER OF people JOINED in EACH MONTH

select month(doj),count(*)

from programmer group by month(doj)

month(doj)	count(*)
1	1
2	2
3	1
4	4
11	1
12	1

9) Display the language wise COUNTS of prof1.

select prof1,count(*) from programmer

group by prof1;

prof1	count(*)
ASSEMBLY	1
BASIC	BASIC
C	
CLIPPER	1
COBOL	2
CPP	1
PASCAL	3

10) Display the language wise COUNTS of prof2

select prof2,count(*) from programmer

group by prof2;

prof2	count(*)
NULL	1
BASIC	1
C	1
COBOL	2
DBASE	4
ORACLE	1

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

select salary,count(*)

from programmer group by salary;

salary	count(*)
2500	2
2800	2
2900	1
3000	2
3200	2
4500	1

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

select splace,count(*) from studies

group by splace;

splace	count(*)
APPLE	1
BDPS	2
BITS	1
BRILLI	1
COIT	1
PRAGATHI	3
SABHARI	3

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

select course,count(*) from studies

group by course;

course	count(*)
DAP	1
DCA	2
DCAP	2
DCP	1
DCS	1
HDCP	1
MCA	1
PGDCA	3

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

select dev_in,sum(dcost) from software

group by dev_in;

dev_in	sum(dcost)
ASSEMBLY	11000
BASIC	6000
C	29100
COBOL	3500
CPP	2400
DBASE	55000
ORACLE	85000
PASCAL	95500

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

select dev_in,sum(scost) from software

group by dev_in;

dev_in	sum(scost)
ASSEMBLY	3250.00
BASIC	399.95
C	8025.00
COBOL	3000.00
CPP	400.00
DBASE	21000.00
ORACLE	18000.00
PASCAL	9199.95

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

select p_name,sum(dcost) from software

group by p_name;

name	sum(dcost)
ANAND	22000
JULIANA	3500
KAMALA	20000
MARY	106200
PATTRICK	1200
QADIR	8400
RAMESH	39500 39500
REMITHA	11000
REVATHI	75000
VIJAYA	700

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

select p_name,sum(scost*sold) from software

group by p_name;

name	sum(scost*sold)
ANAND	84697.85
JULIANA	0.00
KAMALA	63000.00
MARY	183900.00
PATTRICK	25200.00
QADIR	48150.00
RAMESH	91796.35
REMITHA	54475.00
REVATHI	2200.00
VIJAYA	5400.00

18) Display the NUMBER of packages developed by EACH programmer

select p_name,count(title) from software

group by name;

name	count(title)
ANAND	2 2
JULIANA	1
KAMALA	1
MARY	3
PATTRICK	1
QADIR	2
RAMESH	2
REMITHA	2
REVATHI	1
VIJAYA	1

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

select p_name,dev_in,sold*scost as sales

from software;

name	dev_in	sales
MARY	CPP	8400.00
ANAND	BASIC	17197.85
ANAND	PASCAL	67500.00
JULIANA	COBOL	0.00
KAMALA	DBASE	63000.00
MARY	ORACLE	72000.00
MARY	C	103500.00
PATTRICK	CPP	25200.00
QADIR	ASSEMBLY	8250.00
QADIR	C	39900.00
RAMESH	DBASE	48000.00
RAMESH	PASCAL	43796.35
REMITHA	C	C 6975.00
REMITHA	ASSEMBLY	17500.00
REVATHI	PASCAL	2200.00
VIJAYA	C	5400.00

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

select p_name,max(dcost),min(dcost) from software

group BY p_name;

name	max(dcost)	min(dcost)
ANAND	16000	6000
JULIANA	3500	3500
KAMALA	20000	20000
MARY	85000	1200
PATTRICK	1200	1200
QADIR	5000	3400
RAMESH	35000	4500
REMITHA	6000	5000
REVATHI	75000	75000
VIJAYA	700	700

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

select dev_in,sum(scost),avg(dcost),avg(scost),avg(sold*scost)

from software group by dev_in;

dev_in	sum(scost)	avg(dcost)	avg(scost)	avg(sold*scost)
ASSEMBLY	3250.00	5500.0000	1625.000000	12875.000000
BASIC	399.95	6000.0000	399.950000	17197.850000
C	8025.00	7275.0000	2006.250000	46443.750000
COBOL	3000.00	3500.0000	3000.000000	0.000000
CPP	400.00	1200.0000	200.000000	16800.000000
DBASE	21000.00	27500.0000	10500.000000	55500.000000
ORACLE	18000.00	85000.0000	18000.000000	72000.000000
PASCAL	9199.95	31833.3333	3066.650000	37832.116667

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

select splace,count(course),avg(cost) from studies

group by splace;

splace	count(course)	avg(cost)
APPLE	1	14000.0000
BDPS	2	27000.0000
BITS	1	22000.0000
BRILLI	1	11000.0000
COIT	1	7200.0000
PRAGATHI	3	5466.6667
SABHARI	3	4500.0000

23) Display EACH institute name with NUMBER of students.

select splace,count(*)

from studies group by splace;

splace	count(*)
APPLE	1
BDPS	2
BITS	1
BRILLI	1
COIT	1
PRAGATHI	3
SABHARI	3

24) Display names of male and female programmers.

select sex ,count(p_name)from programmer

group by sex

sex	count(name)
F	4
M	6

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

select p_name,title from software

order by p_name;

name	title
ANAND	PARACHUTES
ANAND	VIDEOTITLING
JULIANA	INVENTORY
KAMALA	PAYROLLPRG
MARY	README
MARY	FINANCIALACC
MARY	CODEGENRRATOP
PATTRICK	README
QADIR	BOMBSAWAY
QADIR	VACCINES
RAMESH	HOTLIMGMT
RAMESH	DEADLEE
REMITHA	PCUTILITIES
REMITHA	TSRHELPPKG
REVATHI	HOSPITALMGMT
VIJAYA	TSREDITOR

26) Display the NUMBER of packages in EACH language.

select dev_in,count(title) from software

group by dev_in;

dev_in	count(title)
ASSEMBLY	2
BASIC	1
C	4
COBOL	1
CPP	2
DBASE	2
ORACLE	1
PASCAL	3

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

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

group by dev_in;

dev_in	count(title)
C	1

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

select dev_in,avg(dcost-scost) from software

group by dev_in;

dev_in	avg(dcost-scost)
ASSEMBLY	3875.000000
BASIC	5600.050000
C	5268.750000
COBOL	500.000000
CPP	1000.000000
DBASE	17000.000000
ORACLE	67000.000000
PASCAL	28766.683333

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

select p_name,sum(dcost),sum(scost),sum(dcost-(sold*scost))

from software

group by p_name having sum(dcost)>sum(scost*sold);

name	sum(dcost)	sum(scost)	sum(dcost-(sold*scost))
JULIANA	3500	3000.00	3500.00
REVATHI	75000	1100.00	72800.00

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;

MAX(SALARY)	MIN(SALARY)	AVG(SALARY)
4500	2500	3040.0000

QUERY SET:3

1) Who is the highest paid C programmer?

select * from programmer

where salary=(select max(salary) from programmer

where prof2="c" or prof1="c");

NAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY
► JULIANA	1960-01-31	1990-04-21	F	COBOL	DBASE	3000
QADIR	1965-08-31	1990-04-21	M	ASSEMBLY	C	3000

2) Who is the highest paid female cobol programmer?

select * from programmer

where sex="f" and salary=(select max(salary) from programmer

where prof1="cobol" or prof2="cobol");

NAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY
► JULIANA	1960-01-31	1990-04-21	F	COBOL	DBASE	3000

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

select distinct p_name,salary,prof1 from programmer

where (salary,prof1) in (select max(salary),prof1

group by prof1);

name	salary	prof1
► ANAND	3200	PASCAL
ALTAF	2800	CLIPPER
JULIANA	3000	COBOL
KAMALA	2900	C
MARY	4500	CPP
NELSON	2500	COBOL
PATTRICK	2800	PASCAL
QADIR	3000	ASSEMBLY
RAMESH	3200	PASCAL
REBECCA	2500	BASIC

4) Who is the LEAST experienced programmer?

select floor(datediff(curdate(),doj)/365.25) ,name from programmer

where floor(datediff(curdate(),doj)/365.25)=(select min(floor(datediff(curdate(),doj)/365.25)) from programmer);

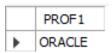| age	name
► 30	ANAND

5) Who is the MOST experienced programmer?

select p_name,floor(datediff(curdate(),doj)/365.25) from programmer

where floor(datediff(curdate(),doj)/365.25)=(select max(floor(datediff(curdate(),doj)/365.25)) from programmer)

	name	age
▶	NELSON	33

6) 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;

	PROF1
▶	ORACLE

7) Who is the YOUNGEST programmer knowing DBASE?

select p_name,prof1,prof2,floor(datediff(curdate(),dob)/365.25) from programmer

where floor(datediff(curdate(),dob)/365.25)=(select min(floor(datediff(curdate(),dob)/365.25)) from programmer

where prof1="dbase" or prof2="dbase")

	name	prof1	prof2	age
▶	NELSON	COBOL	DBASE	37

8) Which institute has MOST NUMBER of students?

select splace from studies group by splace having count(splace)=(select max(occurences) from

(select splace,count(splace) as occurences from studies group by splace) as subquery);

	splace
▶	PRAGATHI
	SABHARI

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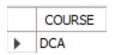
select * from programmer

 where sex = 'f' and salary >3000 and (prof1 not in('c','c++','oracle','dbase')

or prof2 not in('c','c++','oracle','dbase'));

NAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY
► MARY	1970-06-24	1991-02-01	F	CPP	ORACLE	4500

11) Which is the COSTLIEST course?

select course from studies where cost = (select max(cost) from studies)

	COURSE
►	DCA

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

select course from studies group by course having count(course)

order by count(course) desc limit 1;

Result Grid |

	course
►	PGDCA

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

select splace,course from studies

where cost<(select avg(cost) from studies);

	splace	course
►	SABHARI	PGDCA
	COIT	DCA
	PRAGATHI	DCP
	SABHARI	PGDCA
	PRAGATHI	DAP
	PRAGATHI	DCAP
	SABHARI	PGDCA
	BRILLI	DCAP
	BDPS	DCS

14) Which institute conducts COSTLIEST course?

select splace,course from studies

where cost=(select max(cost) from studies);
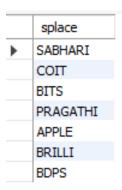
splace	course
▶ BDPS	DCA

15) Which course has below AVERAGE number of students?

select course,count(course)as NoOfStudents from studies group by course

having count(course)<(select avg(NoOfStudents) from (select count(course) as NoOfStudents

from studies group by course)as sub);

course	NoOfStudents
▶ DAP	1
DCP	1
DCS	1
HDCP	1
MCA	1

16) Which institute conducts the above course?

select distinct splace from studies;

splace
▶ SABHARI
COIT
BITS
PRAGATHI
APPLE
BRILLI
BDPS

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

select course from studies where (select avg(cost)+1000 from studies)>cost>(select avg(cost)-1000 from studies);

Output:None

18) Which package has the HIGEST development cost?

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

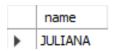| title	dcost
FINANCIALACC	85000

19) Which package has the LOWEST selling cost?

select title,scost from software where scost=(select min(scost) from software);

title	scost
README	100.00

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

select p_name from software where sold=(select min(sold) from software);

name
JULIANA

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

select dev_in,(sold*scost) as sales from software where (sold*scost)=(select max(sold*scost) from software);

dev_in	sales
C	103500.00

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

Select title,dcost from software where dcost=(select max(dcost) from software where dev_in="pascal");

title	dcost
HOSPITALMGMT	75000

23)Which is the COSTLIEAST package developed in PASCAL?

select title,dcost from software where dcost=(select max(dcost) from software);
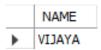
title	dcost
FINANCIALACC	85000

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

select dev_in from software group by dev_in having max(dev_in) = (select max(dev_in) from software);

	dev_in
▶	PASCAL

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

select p_name from software group by p_name having max(p_name) = (select max(p_name) from software);

	NAME
▶	VIJAYA

26) Who is the author of the COSTLIEST package?

select p_name,dcost from software where dcost=(select max(dcost) from software);

	name	dcost
▶	MARY	85000

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

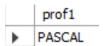select title from software where sold<(select avg(sold) from software);

	title
▶	VIDEOTITLING
	INVENTORY
	PAYROLLPRG
	FINANCIALACC
	CODEGENRRATOP
	BOMBSAWAY
	VACCINES
	HOTLIMGMT
	TSRHELPPKG
	HOSPITALMGMT
	TSREDITOR

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

select p_name,salary from programmer where salary>(select max(salary) from programmer where sex="m") and sex="f";

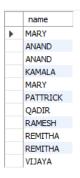|	name	salary
▶	MARY	4500

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);

	prof1
▶	PASCAL

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

select p_name from software where 2*dcost<(scost*sold);

	name
▶	MARY
	ANAND
	ANAND
	KAMALA
	MARY
	PATTRICK
	QADIR
	RAMESH
	REMITHA
	REMITHA
	VIJAYA

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

select p_name,title from software

where dcost in (select min(dcost) from software

group by dev_in);

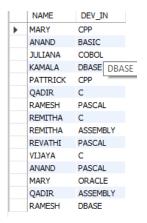| name	title
MARY	README
ANAND	PARACHUTES
JULIANA	INVENTORY
KAMALA	PAYROLLPRG
MARY	FINANCIALACC
MARY	CODEGENRRATOP
PATTRICK	README
QADIR	BOMBSAWAY
RAMESH	DEADLEE
REMITHA	PCUTILITIES
REMITHA	TSRHELPPKG
VIJAYA	TSREDITOR

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

select p_name from programmer where dob=(select (min(dob)) from programmer where year(dob) like '1965');

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

select p_name, dev_in from software where sold in (select max(sold) from software group by p_name) union select p_name, dev_in from software where sold in (select min(sold) from software group by p_name);

NAME	DEV_IN
MARY	CPP
ANAND	BASIC
JULIANA	COBOL
KAMALA	DBASE DBASE
PATTRICK	CPP
QADIR	C
RAMESH	PASCAL
REMITHA	C
REMITHA	ASSEMBLY
REVATHI	PASCAL
VIJAYA	C
ANAND	PASCAL
MARY	ORACLE
QADIR	ASSEMBLY
RAMESH	DBASE

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

select p_name,floor(datediff(curdate(),dob)/365.25) from programmer

where floor(datediff(curdate(),dob)/365.25)=(Select max(floor(datediff(curdate(),dob)/365.25))
from programmer

where sex="f" and year(doj)="1992");

	name	floor(datediff(curdate(),dob)/365.25)
▶	KAMALA	54

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

select distinct year(dob) from programmer where year(dob) = (select min(year(dob))from
programmer);

	year(dob)
▶	1960

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

select distinct month(doj) from programmer where month(doj) = (select min(month(doj))from
programmer);

	month(DOJ)
▶	1

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

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

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

	NAME
▶	ANAND
	ALTAF
	NELSON
	PATTRICK
	QADIR
	RAMESH

QUERY SET 4:

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

select p_name, salary from programmer

where salary = any(select salary from programmer p group by salary having salary=p.salary and count(*)>1)

order by salary desc;

	name	salary
▶	ANAND	3200
	RAMESH	3200
	JULIANA	3000
	QADIR	3000
	ALTAF	2800
	PATTRICK	2800
	NELSON	2500
	REBECCA	2500

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

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

	NAME	TITLE	DEV_IN	SCOST	DCOST	SOLD
▶	ANAND	PARACHUTES	BASIC	399.95	6000	43
	ANAND	VIDEOTITLING	PASCAL	7500.00	16000	9
	RAMESH	HOTLIMGMT	DBASE	12000.00	35000	4
	RAMESH	DEADLEE	PASCAL	599.95	4500	73

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

select s.* from programmer p,software s where p.name=s.name and dev_in="Pascal" and sex="f";-- 3

	NAME	TITLE	DEV_IN	SCOST	DCOST	SOLD
▶	REVATHI	HOSPITALMGMT	PASCAL	1100.00	75000	2

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

select * from programmer where year(doj)<"1990"

	NAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY
▶	NELSON	1985-09-11	1989-03-11	M	COBOL	DBASE	2500

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

select s.title,p.name from programmer p,software s,studies st

where p.name=s.name and p.name=st.name and sex="f" and splace="PRAGATHI";

	title	name
▶	PAYROLLPRG	KAMALA

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.s_name=studies.s_name group by studies.splace;

	splace	count(software.dev_in)	count(software.sold)	sum(software.sold*software.scos
▶	SABHARI	7	7	360394.20
	BITS	1	1	0.00
	PRAGATHI	1	1	63000.00
	APPLE	2	2	48150.00
	BDPS	3	3	59875.00

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 software.* from programmer,software,studies

where programmer.name=software.name and software.name=studies.name and programmer.name=studies.name and sex='m' and dev_in='dbase' and

splace= (select splace from studies group by splace

having count(splace) =(select max(count(splace))from studies group by splace));

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 programmer p,software s

where s.name=p.name and (sex="m" and year(dob)<1965) or (sex="f" and year(dob)>1975);

Output: None

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

select distinct x.* from software x, programmer y where y.prof1 <> x.dev_in and x.name = y.name;

NAME	TITLE	DEV_IN	SCOST	DCOST	SOLD
▶ ANAND	PARACHUTES	BASIC	399.95	6000	43
KAMALA	PAYROLLPRG	DBASE	9000.00	20000	7
MARY	FINANCIALACC	ORACLE	18000.00	85000	4
MARY	CODEGENRRATOP	C	4500.00	20000	23
PATTRICK	README	CPP	CPP 0.00	1200	84
QADIR	VACCINES	C	1900.00	3400	21
RAMESH	HOTLIMGMT	DBASE	12000.00	35000	4

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

select s.* from programmer p,software s where s.name=p.name and (dev_in <> prof1 and dev_in <> prof2);

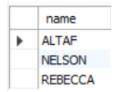| NAME	TITLE	DEV_IN	SCOST	DCOST	SOLD
▶ MARY	CODEGENRRATOP	C	4500.00	20000	23

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

select s.* from programmer p,software s,studies st where s.name=p.name and

s.name=st.name and SPLACE="sabhari"and sex="m";

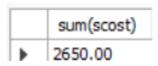| NAME	TITLE	DEV_IN	SCOST	DCOST	SOLD
▶ ANAND	PARACHUTES	BASIC	399.95	6000	43
ANAND	VIDEOTITLING	PASCAL	7500.00	16000	9
RAMESH	HOTLIMGMT	DBASE	12000.00	35000	4
RAMESH	DEADLEE	PASCAL	599.95	4500	73

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

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

name
▶ ALTAF
NELSON
REBECCA

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

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

	sum(scost)
▶	2650.00

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 p_name from programmer where prof2 = any(select prof2 from programmer group by prof2 having count(*) >1);

	name
▶	ALTAF
	JULIANA
	KAMALA
	NELSON
	RAMESH
	REBECCA

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

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

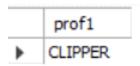|	splace	sum(software.sold*software.scost)
▶	SABHARI	360394.20
	BITS	0.00
	PRAGATHI	63000.00
	APPLE	48150.00
	BDPS	59875.00

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

select splace from software st,studies s where s.name=st.name group by splace,dcost having max(dcost)=(select max(dcost) from software);
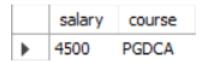
	splace
▶	SABHARI

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);

	prof1
▶	CLIPPER

19) 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.name=s1.name and s1.name=s2.name and scost=(select max(scost) from software);

	salary	course
▶	4500	PGDCA

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;

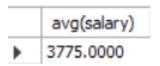|	name	ceil(cost/salary)
▶	ANAND	2
	ALTAF	3
	JULIANA	8
	KAMALA	2
	MARY	1
	NELSON	3
	QADIR	5
	RAMESH	2

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

select x.title from software x, programmer y where (datediff(curdate(), y.doj)/12) > 3 and x.name=y.name;

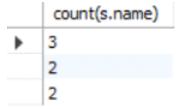| title |
| --- |
| PARACHUTES |
| VIDEOTITLING |
| INVENTORY |
| PAYROLLPRG |
| FINANCIALACC |
| CODEGENRRATOP |
| README |
| BOMBSAWAY |
| VACCINES |
| HOTLIMGMT |
| DEADLEE |

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;

avg(salary)
▶ 3775.0000

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,cost having min(cost)=(select min(cost) from studies);

count(s.name)
▶ 3
2
2

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

select count(title),splace from software s,studies st where s.name=st.name

and dcost=(select min(DCOST) from software)
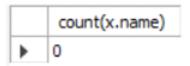
group by splace order by count(title) desc;

count(title)	splace
▶ 1	BDPS

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

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

count(dev_in)
▶ 3

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

select count(x.name) from software x, programmer y, studies z where (datediff(curdate(), y.doj)/12) = (select max(datediff(curdate(),y.doj)/12) from programmer y, studies where z.splace = 'BDPS' and y.name = z.name) and x.name=y.name and z.splace='BDPS';

count(x.name)
▶ 0

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);

name	splace
▶ ALTAF	COIT
NELSON	PRAGATHI
PATRICK	PRAGATHI
RESECCA	BRILLIA

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;

count(*)	PROFIT
▶ 2	31200.00
1	11197.85
3	17996.35
1	-3500.00
4	156675.00
2	14750.00

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

select s.name,count(dev_in) from programmer p1,software s where p1.name=s.name group by s.name;

name	count(dev_in)
MARY	3
ANAND	2
JULIANA	1
KAMALA	1
PATTRICK	1
QADIR	2
RAMESH	2

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

select programmer.* from programmer,studies where splace='SSIL' and programmer.name=software.name and programmer.name=studies.name and studies.splace='s.s.i.l.';

NAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY