

# ASSIGNMENT SQL

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# ASSIGNMENT SQL

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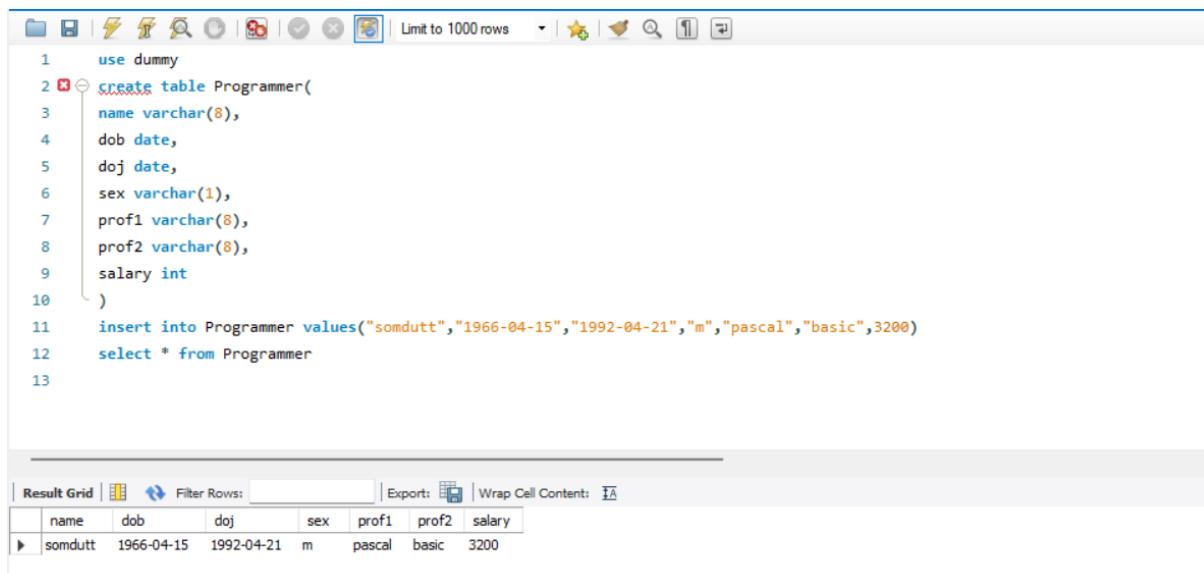
## Question 1:

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

## Commands:



The screenshot shows the Oracle SQL Developer interface. The top half displays the SQL code for creating the 'Programmer' table and inserting a single row. The bottom half shows the resulting table structure and the inserted data.

```
1 use dummy
2 create table Programmer(
3     name varchar(8),
4     dob date,
5     doj date,
6     sex varchar(1),
7     prof1 varchar(8),
8     prof2 varchar(8),
9     salary int
10 )
11 insert into Programmer values("somdutt","1966-04-15","1992-04-21","m","pascal","basic",3200)
12 select * from Programmer
13
```

name	dob	doj	sex	prof1	prof2	salary
somdutt	1966-04-15	1992-04-21	m	pascal	basic	3200

// data – “yyyy-mm-dd”

## Question 2:

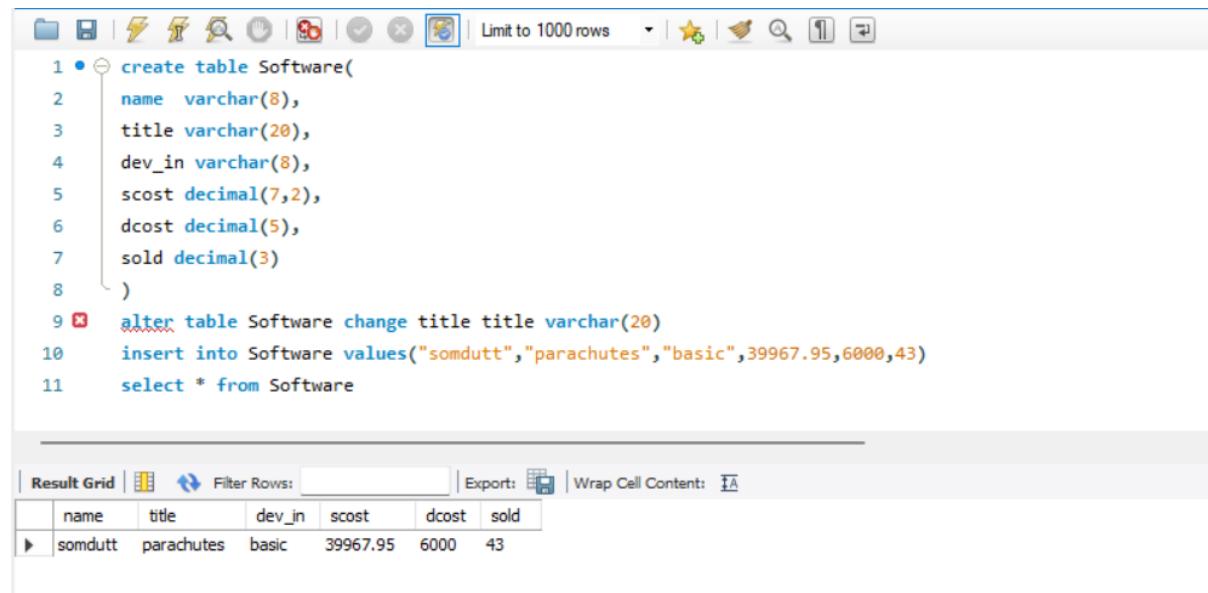
2) Table Name	Software				
name	not null	varchar2(8)	name		
title	not null	varchar2(20)	developed project name		
dev_in	not null	varchar2(8)	language developed		
scost		number(7,2)	software cost		
dcost		number(5)	development cost		
sold		number(3)	number of software sold		

Sample Data					
somdutt	parachutes	basic	399.95	6000	43

If a DECIMAL(5) column is defined, it means that the column can store numbers with up to 5 digits in total.

## Commands:



The screenshot shows the MySQL Workbench interface with the following details:

- SQL Editor:** Displays the SQL commands used to create the table and insert data.

```
1 • 1 create table Software(
2   name varchar(8),
3   title varchar(20),
4   dev_in varchar(8),
5   scost decimal(7,2),
6   dcost decimal(5),
7   sold decimal(3)
8 )
9 ✘ alter table Software change title title varchar(20)
10 insert into Software values("somdutt","parachutes","basic",39967.95,6000,43)
11 select * from Software
```
- Result Grid:** Shows the resulting data from the 'select \* from Software' query.

	name	title	dev_in	scost	dcost	sold
▶	somdutt	parachutes	basic	39967.95	6000	43

### Question 3:

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

### Commands:

```
1 •  create table Studies(
2     name varchar(20),
3     splace varchar(20),
4     course varchar(20),
5     ccost varchar(20)
6 )
7 ✘  insert into Studies values("somdutt","sabhari","pgdca","4500");
8 •  insert into Studies values("devdutt","bdps","dcs","5000")
9
10 ✘  select * from Studies
```

Result Grid				
	name	splace	course	ccost
▶	somdutt	sabhari	pgdca	4500
	devdutt	bdps	dcs	5000

# QUERIES -1

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1
2 •  select avg(scost) as avg_scost from software where dev_in = "pascal"
```

The results pane shows a single row in a grid:

avg_scost
98765.890000

- 2) Display the names and ages of all programmers.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1
2 •  select name as name, floor(datediff(current_date(),dob)/365)as Age from Programmer
```

The results pane shows the following data in a grid:

name	Age
somdutt	58
sowmiya	21

## Method 2:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 •  select timestampdiff(year,dob,current_date()) as oldest_age from Programmer
2
3
```

The results pane shows the following data in a grid:

oldest_age
58
21

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

Commands:

The screenshot shows the MySQL Workbench interface. The toolbar at the top includes icons for file operations, search, and export. A dropdown menu says "Limit to 1000 rows". Below the toolbar is a query editor window containing the following SQL code:

```
1 • select name,floor(datediff(current_date(),dob)/365) as Age from Programmer where prof1="dcz" or prof2="dcz"
```

Below the query editor is a results grid titled "Result Grid" with two columns: "name" and "Age". The first row shows "name" and "Age" as column headers.

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

Commands:

The screenshot shows the MySQL Workbench interface. The toolbar at the top includes icons for file operations, search, and export. A dropdown menu says "Limit to 1000 rows". Below the toolbar is a query editor window containing the following SQL code:

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

Below the query editor is a results grid titled "Result Grid" with one column labeled "highest\_copies". The first row shows "highest\_copies" as the column header, and the value "45" is listed below it.

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

Commands:

The screenshot shows the MySQL Workbench interface. The toolbar at the top includes icons for file operations, search, and export. A dropdown menu says "Limit to 1000 rows". Below the toolbar is a query editor window containing the following SQL code:

```
1  
2 • select name,dob from Programmer where month(dob) = 1  
3 ✘ select name,dob from Programmer where month(dob) = 4  
4
```

Below the query editor is a results grid titled "Result Grid" with two columns: "name" and "dob". The first row shows "name" and "dob" as column headers, and the second row shows "somdutt" and "1966-04-15".

6) Display lowest course fee.

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 select min(scost) as minnimum_cost from Software
```

The results grid shows the output of the query:

minnimum_cost
39967.95

7) How many programmer has done PGDCA course

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 select count(name) as count from Programmer where prof1 = "pgdca" or prof2 = "pgdca"
```

The results grid shows the output of the query:

count
0

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 select sum(sold*scost) as revenue from Software where dev_in = "c"
```

The results grid shows the output of the query:

revenue
HULL

9) Display the details of software developed by Ramesh?

Commands:

The screenshot shows the MySQL Workbench interface. The toolbar at the top has various icons for file operations, search, and navigation. Below the toolbar, a query window contains the following SQL code:

```
1 select * from Software where name = "Ramesh"
```

The results are displayed in a grid titled "Result Grid". The columns are labeled "name", "title", "dev\_in", "scost", "dcost", and "sold". There are no visible rows in the grid.

10) How many programmers studied at SABHARI

Commands:

The screenshot shows the MySQL Workbench interface. The toolbar at the top has various icons for file operations, search, and navigation. Below the toolbar, a query window contains the following SQL code:

```
1 select count(name) as count from Programmer where prof1="sabhari" or prof2 ="sabhari"
```

The results are displayed in a grid titled "Result Grid". The column is labeled "count". The value shown is 0.

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

Commands:

The screenshot shows the MySQL Workbench interface. The toolbar at the top has various icons for file operations, search, and navigation. Below the toolbar, a query window contains the following SQL code:

```
1 • select * from Software where sold > 2000;
```

The results are displayed in a grid titled "Result Grid". The columns are labeled "name", "title", "dev\_in", "scost", "dcost", and "sold". There are no visible rows in the grid.

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following code:

```
1 select ceil(dcost/scost) as copies_to_sell from Software
```

The result grid shows the output:

copies_to_sell
1
1

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following code:

```
1
2 • select max(scost) as costliest_software from Software where dev_in="basic"
3
```

The result grid shows the output:

costliest_software
39967.95

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

The screenshot shows the MySQL Workbench interface. The query window contains the following code:

```
SQL File 4* x
1 select * from Software where (sold*scost)>=dcost
```

The result grid shows the output:

name	title	dev_in	scost	dcost	sold
somdutt	parachutes	basic	39967.95	6000	43
sowmiya	parachutes	pascal	98765.89	6000	45

15) How many packages were developed in dbase?

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query window contains the following SQL code:

```
1 select count(*) as no_of_package from Software where dev_in = 'dbase';
```

Below the query window is the result grid. It has a header row labeled "no\_of\_package". Underneath, there is one data row with the value "0".

no_of_package
0

16) How many programmers studies at paragathi?

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query window contains the following SQL code:

```
1 count(*) as programmers_count from Studies where splace = "paragathi"
```

Below the query window is the result grid. It has a header row labeled "programmers\_count". Underneath, there is one data row with the value "0".

programmers_count
0

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query window contains the following SQL code:

```
1 • select count(*) as programmers_count from Studies where ccost between 5000 and 10000  
2
```

Below the query window is the result grid. It has a header row labeled "programmers\_count". Underneath, there is one data row with the value "1".

programmers_count
1

18) What is the average course fee?

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a query editor window containing the following SQL code:

```
1 • select avg(ccost) as avg_cost from Studies
```

Below the query editor is a result grid labeled "Result Grid". It has a single row with one column, "avg\_cost", which contains the value 4750.

19) Display the details of programmers knowing c?

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a query editor window containing the following SQL code:

```
1 select * from Programmer where prof1="c" or prof2="c"
```

Below the query editor is a result grid labeled "Result Grid". It has a single row with columns: name, dob, DOJ, sex, prof1, prof2, and salary. The values are: name - sowmiya, dob - 2002-08-29, DOJ - 2023-04-08, sex - f, prof1 - c, prof2 - c++, salary - 40000.

20) How many programmers know either Cobol or Pascal?

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a query editor window containing the following SQL code:

```
1 • select count(*) as count from Programmer where prof1 IN("cobol","pascal") or prof2 IN ("cobol","pascal")
2
3
```

Below the query editor is a result grid labeled "Result Grid". It has a single row with one column, "count", which contains the value 1.

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 • select count(*) as count from Programmer where prof1 NOT IN("pascal","c") and prof2 NOT IN("pascal","c");  
2
```

The results grid shows one row with the column 'count' and value '0'.

22) How old is the oldest male programmers?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 • select timestampdiff(year,max(dob),current_date()) as oldest_age from Programmer where sex="m"
```

The results grid shows one row with the column 'oldest\_age' and value '58'.

23) What is the average age of female programmers?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
1  
2 • insert into Programmer values ("kavila","2003-11-27","2024-01-26","f","c","c++",70000)  
3 ✘ select avg(timestampdiff(year,dob,current_date())) as oldest_age from Programmer where sex ="f"
```

The results grid shows one row with the column 'oldest\_age' and value '20.5000'.

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 • select timestampdiff(year,doj,current_date()) as experience, name as name from Programmer order by experience desc;
```

The results are displayed in a grid:

experience	name
31	somdutt
1	somya
0	kavila

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 select name as programmer from Programmer where month(dob) = month(current_date())
```

The results are displayed in a grid:

programmer
somdutt

26) How many female programmers are there?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 • select count(*) as female_programmer_count from Programmer where sex='f'
```

The results are displayed in a grid:

female_programmer_count
2

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

Commands:

The screenshot shows the MySQL Workbench interface with a query editor window titled "SQL File 4". The query is:

```
1 •  select distinct prof1 as language_known from Programmer where sex="m"  
2     union  select distinct prof2 as language_known from Programmer where sex="m"  
3
```

The result grid shows the output:

language_known
pascal
basic

28) What is the Average salary?

Commands:

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:

```
1 •  select avg(salary) as avg_salary from programmer
```

A message box indicates: "Sowmiya V (sowmiyavisanathan07@outlook.com) is signed in".

The result grid shows the output:

avg_salary
37733.3333

29) How many people draw 2000 to 4000

Commands:

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:

```
1     select count(*) as count from Programmer where salary >= 2000 and salary <=4000
```

The result grid shows the output:

count
1

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1 select * from Programmer where prof1 NOT IN ("clipper","cobol","pascal") and prof2 NOT IN ("clipper","cobol","pascal");
```

Below the SQL editor is a Result Grid window. It has a header row with columns: name, dob, doj, sex, prof1, prof2, salary. Two rows of data are displayed:

name	dob	doj	sex	prof1	prof2	salary
sowmiya	2002-08-29	2023-04-08	f	c	c++	40000
kavila	2003-11-27	2024-01-26	f	c	c++	70000

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1 select count(*) as female_programmer from Programmer where sex="f" and (prof1="c" or prof2="c") and timestampdiff(year,dob,current_date())>24;
```

Below the SQL editor is a Result Grid window. It has a header row with a single column: female\_programmer. One row of data is displayed:

female_programmer
0

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1
2 • insert into Programmer values("sowmiyav","2000-04-21","2020-04-21","f","c","c++","6000");
3 • select name as programmer_name from Programmer where date_format(dob,"%m-%d") between date_format(current_date(),"%m-%d")
4      and date_format(date_add(current_date(),interval 7 day),"%m-%d");
5
```

Below the SQL editor is a Result Grid window. It has a header row with a single column: programmer\_name. One row of data is displayed:

programmer_name
sowmiyav

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 •  select * from Programmer where timestampdiff(year,doj,current_date()) <1
```

The results grid shows one row of data:

	name	dob	doj	sex	prof1	prof2	salary
▶	kavila	2003-11-27	2024-01-26	f	c	c++	70000

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 •  select * from Programmer where timestampdiff(year,doj,current_date()) =2;
```

The results grid shows no rows.

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1   select (dcost - (scost*sold)) as recoverd_amount , title  from Software where (scost*sold) < dcost;
2
3
```

The results grid shows no rows.

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

Commands:

The screenshot shows a MySQL command-line interface. At the top, there's a toolbar with various icons. Below it, a command line displays the SQL query: "1 select title from Software where sold =0;". The results pane below shows a single row with the column 'title' containing an empty value.

title

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

Commands:

The screenshot shows a MySQL command-line interface. At the top, there's a toolbar with various icons. Below it, a command line displays the SQL query: "1 select scost from Software where dev\_in = "Mary"". The results pane below shows a single row with the column 'scost' containing an empty value.

scost

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the command:

```
1   select distinct place from Studies
```

The results grid shows the following data:

place
sabhari
beps

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the command:

```
1   select count(distinct course) as courses from Studies
```

The results grid shows the following data:

courses
2

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the command:

```
1 •  select name from Programmer where length(name) - length(replace(name,"a"," ")) = 2;
```

The results grid shows the following data:

name

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

Commands:

The screenshot shows a MySQL Workbench interface. The toolbar at the top has various icons for file operations, search, and database management. Below the toolbar, a query window displays the following SQL code:

```
1 •  select name from Programmer where length(name) <=5;
```

The result grid below shows one row with the column 'name' containing the value 'John'.

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

Commands:

The screenshot shows a MySQL Workbench interface. The toolbar at the top has various icons for file operations, search, and database management. Below the toolbar, a query window displays the following SQL code:

```
1 •  select count(*) as count from Programmer where sex='f' and (prof1='cobol' or prof2='cobol') and timestampdiff(year,doj,current_date())>2;
```

The result grid below shows one row with the column 'count' containing the value '0'.

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

Commands:

The screenshot shows a MySQL Workbench interface. The toolbar at the top has various icons for file operations, search, and database management. Below the toolbar, a query window displays the following SQL code:

```
1 •  select min(length(name)) as shortest_length from Programmer
```

The screenshot shows a MySQL Workbench interface. The toolbar at the top has various icons for file operations, search, and database management. Below the toolbar, a query window displays the following SQL code:

```
1 •  select min(length(name)) as shortest_length from Programmer
```

The result grid below shows one row with the column 'shortest\_length' containing the value '6'.

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

Commands:

```
1 select avg(dcost) as avarage_cost from Software where dev_in ="cobol"
2
```

The screenshot shows a database interface with a toolbar at the top containing various icons for file operations, search, and export. Below the toolbar is a code editor window displaying the SQL query. The result grid below shows one row with the column 'avarage\_cost' and the value 'NULL'.

avarage_cost
NULL

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

Commands:

```
1 select name,sex,concat(day(dob),"/",month(dob),"/",right(year(dob),2)) as date_of_birth,
2       concat(day(doJ),"/",month(doJ),"/",right(year(doJ),2)) as date_of_joining from Programmer
3
```

The screenshot shows a database interface with a toolbar at the top. Below the toolbar is a code editor window displaying the SQL query. The result grid below shows three rows with columns 'name', 'sex', 'date\_of\_birth', and 'date\_of\_joining'. The data is as follows:

name	sex	date_of_birth	date_of_joining
somdutt	m	15/4/66	21/4/92
sowmiya	f	29/8/02	8/4/23
kavila	f	27/11/03	26/1/24

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

Commands:

```
1 select name from Programmer where day(dob) = day(last_day(dob));
```

The screenshot shows a database interface with a toolbar at the top. Below the toolbar is a code editor window displaying the SQL query. The result grid below shows one row with the column 'name'.

name

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 •  select sum(salary) as total_salary from Programmer where sex="m" and prof1 NOT IN ("cobol") and prof2 NOT IN ("cobol")
```

The result grid shows one row with the column 'total\_salary' containing the value 3200.

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1     select title,scost,dcost,(scost-dcost) as difference from software order by difference desc;
```

The result grid shows two rows with columns 'title', 'scost', 'dcost', and 'difference'. The data is as follows:

title	scost	dcost	difference
parachutes	98765.89	6000	92765.89
parachutes	39967.95	6000	33967.95

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 •  ect name,dob,doj from Programmer where month(dob) = month(doJ);
```

The result grid shows two rows with columns 'name', 'dob', and 'doj'. The data is as follows:

name	dob	doj
somdutt	1966-04-15	1992-04-21
sowmiyav	2000-04-21	2020-04-21

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

Commands:

The screenshot shows a MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a command line window containing the following SQL query:

```
1 •  select title from Software where title like "% %";
```

Below the command line is a results grid titled "Result Grid". It has one column labeled "title". There is no data present in the grid.

## QUERIES - II

---

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

Commands:

The screenshot shows a MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a command line window containing the following SQL query:

```
1   select dev_in as language , count(*) as count from software
2       group by dev_in;
```

Below the command line is a results grid titled "Result Grid". It has two columns: "language" and "count". The data shows two rows: "basic" with a count of 1, and "pascal" with a count of 1. The row for "pascal" is currently selected.

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

Command

The screenshot shows the MySQL Workbench interface. The command window contains the following SQL code:

```
1 •  select name as name, count(*) as count from software
2      group by name;
```

The result grid displays the following data:

name	count
somdutt	1
sowmiya	1

- 3) Display THE NUMBER OF male and female programmer.

Commands:

The screenshot shows the MySQL Workbench interface. The command window contains the following SQL code:

```
1 •  select sex, count(*) as count from Programmer
2      group by sex;
```

The result grid displays the following data:

sex	count
m	1
f	3

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

Commands:

The screenshot shows the MySQL Workbench interface. The command window contains the following SQL code:

```
1 •  select dev_in , max(scost), max(sold) from Software group by dev_in;
```

The result grid displays the following data:

dev_in	max(scost)	max(sold)
basic	39967.95	43
pascal	98765.89	45

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 select year(dob) as year , count(*) as count from Programmer
2 group by year(dob)
```

Below the SQL editor is the Result Grid. It has columns for 'year' and 'count'. The data is as follows:

year	count
1966	1
2000	1
2002	1
2003	1

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 select year(do_j) as joined_year , count(*) as count from Programmer
2 group by year(do_j)
```

Below the SQL editor is the Result Grid. It has columns for 'joined\_year' and 'count'. The data is as follows:

joined_year	count
1992	1
2023	1
2024	1
2020	1

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 • select month(dob) as month, count(*) as count from Programmer
2 group by month(dob)
```

Below the SQL editor is the Result Grid. It has columns for 'month' and 'count'. The data is as follows:

month	count
4	2
8	1
11	1

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following code:

```
1 • select month(join_date) as joined_month, count(*) as count from Programmer
2      group by month(join_date)
```

Below the SQL editor is a "Result Grid" table with two columns: "joined\_month" and "count". The data shows two rows: one for month 4 with a count of 3, and another for month 1 with a count of 1.

joined_month	count
4	3
1	1

9) Display the language wise COUNTS of prof1.

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following code:

```
1 • select prof1 as language, count(*) as count from programmer
2      group by prof1;
```

Below the SQL editor is a "Result Grid" table with two columns: "language" and "count". The data shows two rows: one for language "pascal" with a count of 1, and another for language "c" with a count of 3.

language	count
pascal	1
c	3

10) Display the language wise COUNTS of prof2.

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following code:

```
1 • select prof2 as language, count(*) as count from programmer
2      group by prof2;
```

Below the SQL editor is a "Result Grid" table with two columns: "language" and "count". The data shows two rows: one for language "basic" with a count of 1, and another for language "c++" with a count of 3.

language	count
basic	1
c++	3

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 •  select salary,count(*) as count from Programmer group by salary
2
```

The results are displayed in a grid:

salary	count
3200	1
40000	1
70000	1
6000	1

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 •  select splace,count(*) as count from Studies
2      group by splace
```

The results are displayed in a grid:

splace	count
sabhari	1
bdps	1

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 •  select course,count(*) as count from Studies
2      group by course
```

The results are displayed in a grid:

course	count
pgdca	1
dcs	1

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query window displays the following SQL command:

```
1 • select dev_in as language,sum(dcost) as totak_cost from Software group by dev_in
```

Below the query window is a result grid. The grid has two columns: "language" and "totak\_cost". It contains two rows of data:

language	totak_cost
basic	6000
pascal	6000

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query window displays the following SQL command:

```
1 select dev_in as language , sum(scost) from Software group by dev_in;
```

Below the query window is a result grid. The grid has two columns: "language" and "sum(scost)". It contains two rows of data:

language	sum(scost)
basic	39967.95
pascal	98765.89

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

commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query window displays the following SQL command:

```
1 select name as name , sum(sold) as total_cost from Software group by name
```

Below the query window is a result grid. The grid has two columns: "name" and "total\_cost". It contains two rows of data:

name	total_cost
somdutt	43
sowmiya	45

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 select name as name , sum(scost*sold) as sales_ammount from software
2 group by name;
```

The result grid shows the following data:

name	sales_ammount
somdutt	1718621.85
sowmiya	4444465.05

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 • select name,count(title) as count from Software
2 group by name;
```

The result grid shows the following data:

name	count
somdutt	1
sowmiya	1

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

Commands:

The screenshot shows the MySQL Workbench interface. The query window contains the following SQL code:

```
1 • select dev_in , sum(scost) from Software group by dev_in
```

The result grid shows the following data:

dev_in	sum(scost)
basic	39967.95
pascal	98765.89

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1 select name,max(dcost) as costliest_package ,min(dcost) as cheapest_package from Software group by name;
```

Below the SQL editor is a "Result Grid" window. It has a header row with columns: name, costliest\_package, and cheapest\_package. The data grid shows two rows of results:

name	costliest_package	cheapest_package
somdutt	6000	6000
sowmiya	6000	6000

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following query:

```
1 select dev_in as language, avg(dcost) as avg_devolpemnt,
2       avg(scost) as avg_cost , avg(scost/sold) as avg_price_per_copy
3       from Software group by dev_in;
```

Below the SQL editor is a "Result Grid" window. It has a header row with columns: language, avg\_devolpemnt, avg\_cost, and avg\_price\_per\_copy. The data grid shows two rows of results:

language	avg_devolpemnt	avg_cost	avg_price_per_copy
basic	6000.0000	39967.950000	929.4872090000
pascal	6000.0000	98765.890000	2194.7975560000

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

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a text area containing the following SQL code:

```
1 •  select splace as institution, count(course) as number_of_courses,
2      avg(ccost) as avg_cost_per_course from Studies group by splace;
```

Below the code is a "Result Grid" table with three columns: "institution", "number\_of\_courses", and "avg\_cost\_per\_course". The data shows two rows: one for "sabhari" with 1 course and an average cost of 4500, and another for "bdps" with 1 course and an average cost of 5000.

institution	number_of_courses	avg_cost_per_course
sabhari	1	4500
bdps	1	5000

23) Display EACH institute name with NUMBER of students.

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a text area containing the following SQL code:

```
1 •  select splace as Institution ,count(name) from Studies
2      group by splace;
```

Below the code is a "Result Grid" table with two columns: "Institution" and "count(name)". The data shows two rows: one for "sabhari" with 1 student and another for "bdps" with 1 student.

Institution	count(name)
sabhari	1
bdps	1

24) Display names of male and female programmers.

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a text area containing the following SQL code:

```
1 •  select name,sex from Programmer order by sex;
```

Below the code is a "Result Grid" table with two columns: "name" and "sex". The data shows four rows: "sowmiya" (f), "kavila" (f), "sowmiyav" (f), and "somdutt" (m).

name	sex
sowmiya	f
kavila	f
sowmiyav	f
somdutt	m

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query editor window contains the following SQL code:

```
1 •  select name , title from Software order by name;
```

Below the query editor is a result grid titled "Result Grid". It displays two columns: "name" and "title". The data shows three rows:

name	title
somdutt	parachutes
sowmi	parachutes
sowmiya	parachutes

26) Display the NUMBER of packages in EACH language.

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query editor window contains the following SQL code:

```
1 •  select dev_in as language , count(title) from software  
2       group by dev_in;
```

Below the query editor is a result grid titled "Result Grid". It displays two columns: "language" and "count(title)". The data shows two rows:

language	count(title)
basic	1
pascal	2

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query editor window contains the following SQL code:

```
1 •  select dev_in as language , count(title) as total from Software where dcost<1000  
2       group by dev_in
```

Below the query editor is a result grid titled "Result Grid". It displays two columns: "language" and "total". The data shows one row:

language	total

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 • select dev_in as language, avg(scost - dcost) as avg_difference from software
2       group by dev_in;
3
```

The result grid shows the following data:

language	avg_difference
basic	33967.950000
pascal	92765.890000

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 • SELECT name, SUM(scost) AS total_selling_cost, SUM(dcost) AS total_development_cost, SUM(sold * scost)
2      AS amount_to_be_recovered FROM Software WHERE dcost > (sold * scost) GROUP BY name;
3
```

The result grid shows the following data:

name	total_selling_cost	total_development_cost	amount_to_be_recovered
------	--------------------	------------------------	------------------------

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 • select max(salary) as max_salary , min(salary) as min_salary,avg(salary) as avg_salary from Programmer
2      where salary > 2000;
```

The result grid shows the following data:

max_salary	min_salary	avg_salary
70000	3200	29800.0000

## QUERIES – III

---

1) Who is the highest paid C programmer?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 •  select name,salary from Programmer where prof1 ="c" or prof2="c"
2       order by salary desc limit 1
```

The results grid shows one row of data:

name	salary
kavila	70000

2) Who is the highest paid female cobol programmer?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following code:

```
1 •  select name,salary from programmer where sex="f" and
2       (prof1 = "cobol" or prof2="cobol") order by salary desc limit 1;
```

The results grid shows one row of data:

name	salary

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

Commands:

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:SELECT dev\_in, name FROM Software JOIN Programmer ON Software.name = Programmer.name GROUP BY dev\_in ORDER BY scost DESC;

4) Who is the LEAST experienced programmer?

Commands:

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:select name,timestampdiff(year,doj,current\_date()) as experience  
from Programmer order by experience limit 1;

Result Grid

name	experience
kavila	0

5) Who is the MOST experienced programmer?

Commands:

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:select name,timestampdiff(year,doj,current\_date()) as experience  
from Programmer order by experience desc limit 1;

Result Grid

name	experience
somdutt	31

6) Which language is known by ONLY ONE programmer?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 select dev_in as language , count(*) as count from Software
2 group by language having count =1;
3
4
```

The result grid shows a single row:

language	count
basic	1

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 • 1 select language from( select prof1 as language from Programmer union all
2           select prof2 as language from Programmer)combined_language group by language
3           having count(*) = 1;
```

The result grid shows a single row:

language

7) Who is the YONGEST programmer knowing DBASE?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

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

The result grid shows a single row:

name	age

8) Which institute has MOST NUMBER of students?

```
1 •  select splace as institue , count(*) as student from Studies  
2      group by splace order by student desc limit 1;  
3  
4
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:	Fetch rows:
sabhari	1				

9) Who is the above programmer?

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

Commands:

```
1 •  select name,salary from Programmer where sex="F" and salary >3000  
2      and prof1 NOT IN('C', 'C++', 'Oracle', 'DBASE') and prof2 NOT IN ('C', 'C++', 'Oracle', 'DBASE');
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:	Fetch rows:

11) Which is the COSTLIEST course?

Commands:

```
1 •  course,ccost as course_cost from Studies order by ccost desc limit 1;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:	Fetch rows:
dcs	5000				

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

Commands:

```
1 select course, count(name) as student_count from Studies
2 group by course order by student_count desc limit 1;
```

The screenshot shows the MySQL Workbench interface. The SQL editor contains the provided query. The results are displayed in a grid titled "Result Grid". The grid has two columns: "course" and "student\_count". A single row is present, showing "pgdca" in the "course" column and "1" in the "student\_count" column.

course	student_count
pgdca	1

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

Commands:

```
1 • select place as Institute , course as course from Studies
2 where ccost < (select avg(ccost) from Studies);
```

The screenshot shows the MySQL Workbench interface. The SQL editor contains the provided query. The results are displayed in a grid titled "Result Grid". The grid has two columns: "Institute" and "course". Two rows are present, showing "sabhari" in the "Institute" column and "pgdca" in the "course" column.

Institute	course
sabhari	pgdca

14) Which institute conducts COSTLIES course?

Commands:

Method 1:

```
1 • select place as institute, course as course, ccost as course_cost
2 from Studies
3 order by ccost desc
4 limit 1;
5
6
```

The screenshot shows the MySQL Workbench interface. The SQL editor contains the provided query. The results are displayed in a grid titled "Result Grid". The grid has three columns: "institute", "course", and "course\_cost". A single row is present, showing "bdps" in the "institute" column, "dcs" in the "course" column, and "5000" in the "course\_cost" column.

institute	course	course_cost
bdps	dcs	5000

Method 2:

Result Grid | Filter Rows: Export: Wrap Cell Content:

place
bdps

15) Which course has below AVERAGE number of students?

Commands:

Result Grid | Filter Rows: Export: Wrap Cell Content:

course
--------

16) Which institute conducts the above course?

Commands:

Result Grid | Filter Rows: Export: Wrap Cell Content:

course
--------

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

Commands:

Result Grid | Filter Rows: Export: Wrap Cell Content:

course
pgdca
dcs

18) Which package has the HIGEST development cost?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1  select title from Software order by dcost desc limit 1
```

The results grid shows one row:

title
parachutes

19) Which package has the LOWEST selling cost?

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
1  select distinct title from Software where dcost = (select min(dcost) from Software);
2
3 •  select title from Software order by dcost limit 1
```

The results grid shows one row:

title
parachutes

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following queries:

```
1 •  select name from Software order by sold limit 1;
2
3 •  select name , sold from Software order by sold limit 1;
```

The results grid shows one row:

name	sold
somdutt	43

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

The screenshot shows a MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a text area containing the following SQL code:

```
1 •  select dev_in from Software order by (sold*scost) desc limit 1;
2
3
```

Below the code is a result grid labeled "Result Grid". It has columns: name, title, dev\_in, scost, dcost, sold. The data is as follows:

	name	title	dev_in	scost	dcost	sold
▶	somdutt	parachutes	basic	39967.95	6000	43
	sowmiya	parachutes	pascal	98765.89	6000	45
	sowmi	parachutes	pascal	98765.89	6000	45

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

Commands:

The screenshot shows a MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a text area containing the following SQL code:

```
1 •  SELECT sold FROM Software ORDER BY (scost - dcost) ASC LIMIT 1;
2
```

Below the code is a result grid labeled "Result Grid". It has a single column: sold. The data is as follows:

	sold
▶	43

23) Which is the COSTLEAST package developed in PASCAL?

Commands:

```
1 •   select title from Software where dev_in="pascal" and dcost = (select max(dcost) from Software);
```

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a query editor window containing the SQL query. The results are displayed in a "Result Grid" table, which shows two rows: "parachutes" and "parachutes".

title
parachutes
parachutes

```
1 •   select name as package_name from Software where dev_in="pascal"  
2       order by dcost desc limit 1;
```

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a query editor window containing the SQL query. The results are displayed in a "Result Grid" table, which shows one row: "sowmiya".

package_name
sowmiya

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

Commands:

```
1     select dev_in as language , count(title) as count from Software group by language order by count desc limit 1;  
2  
3
```

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a query editor window containing the SQL query. The results are displayed in a "Result Grid" table, which shows one row: "pascal" with a count of 2.

language	count
pascal	2

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query editor window contains the following SQL code:

```
1 select name , count(title) as count from Software group by name order by count desc limit 1;
```

Below the query editor is a result grid window titled "Result Grid". It displays a single row of data:

name	count
somdutt	1

26) Who is the author of the COSTLIESST package?

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query editor window contains the following SQL code:

```
1 select name from Software order by scost desc limit 1;
```

Below the query editor is a result grid window titled "Result Grid". It displays a single row of data:

name
sowmiya

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a query editor window contains the following SQL code:

```
1 • select title from Software group by title having sum(sold) < (select avg(sold) from Software);
```

Below the query editor is a result grid window titled "Result Grid". It displays a single row of data:

title

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 select name from Programmer where sex="F"
2 and salary >(select max(salary) from Programmer where sex="M")
3
```

At the bottom, the Result Grid displays the following data:

name
sowmiya
kavila
sowmiyav

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 • select prof1 , count(*) as count  from Programmer
2 group by prof1 order by count desc limit 1;
3
```

At the bottom, the Result Grid displays the following data:

prof1	count
c	3

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1
2
3 • SELECT name FROM Software GROUP BY name HAVING SUM(scost * sold) > (2 * SUM(dcost));
4
5
6
```

At the bottom, the Result Grid displays the following data:

name
somdutt
sowmiya
sowmi

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 •  SELECT name, dev_in, MIN(scost) AS cheapest_package_cost FROM Software
2   GROUP BY name, dev_in;
3
4
5
```

The result grid displays the following data:

	name	dev_in	cheapest_package_cost
▶	somdutt	basic	39967.95
▶	sowmiya	pascal	98765.89
▶	sowmi	pascal	98765.89

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1
2 •  select name from Programmer where sex="m" and year(dob) = 1966 order by month(dob) asc limit 1;
3
4
```

The result grid displays the following data:

	name
▶	sandy

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

Commands:

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 •  SELECT name,
2       (SELECT dev_in FROM Software WHERE name = p.name ORDER BY sold DESC LIMIT 1) AS language_highest_selling,
3       (SELECT dev_in FROM Software WHERE name = p.name ORDER BY sold ASC LIMIT 1) AS language_lowest_selling
4   FROM Programmer p;
5
6
7
```

The result grid displays the following data:

	name	language_highest_selling	language_lowest_selling
▶	somdutt	basic	basic
▶	sowmiya	pascal	pascal
▶	kavila	basic	basic
▶	sandy	basic	basic
▶	sandy	basic	basic

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1
2 • select name from Programmer where sex="f" and year(doJ) = 1992 order by month(doJ) asc limit 1;
3
4
```

Below the SQL editor is the result grid. It has a header row with "Result Grid" and "name". The data row contains the name "name".

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

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

Below the SQL editor is the result grid. It has a header row with "year" and "count". The data row contains the values "1966" and "3".

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 • select month(dob) as month, count(*) as count from Programmer
2 group by month order by count desc limit 1;
```

Below the SQL editor is the result grid. It has a header row with "month" and "count". The data row contains the values "4" and "2".

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a code editor window displays the following SQL query:

```
1 •  SELECT dev_in AS language, COUNT(*) AS num_programmers FROM Software
2   GROUP BY dev_in ORDER BY COUNT(*) DESC LIMIT 1;
3
4
5
```

Below the code editor is a result grid. The grid has two columns: "language" and "num\_programmers". There is one row of data: "pascal" and "2".

language	num_programmers
pascal	2

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a code editor window displays the following SQL query:

```
1 •  SELECT name FROM Programmer WHERE sex = 'm' AND salary < (SELECT AVG(salary) FROM Programmer WHERE sex = 'f');
2
3
4
```

Below the code editor is a result grid. The grid has one column: "name". There are three rows of data: "somdutt", "sandy", and "sandy".

name
somdutt
sandy
sandy

## QUERIES – IV

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following code:

```
1 • select * from Programmer where salary in(select salary
2      from Programmer group by salary having count(*)>1);
3
```

Below the SQL editor is a "Result Grid" window. It has a header row with columns: name, dob, doj, sex, prof1, prof2, salary. The data grid contains three rows of data:

	name	dob	doj	sex	prof1	prof2	salary
▶	somdutt	1966-04-15	1992-04-21	m	pascal	basic	3200
	sandy	1966-02-15	1992-04-21	m	pascal	basic	3200
	sandy	1966-02-15	1992-04-21	m	pascal	basic	3200

At the bottom of the result grid, it says "Programmer 367".

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, a SQL editor window contains the following code:

```
1 • select s.* from Software s INNER JOIN Programmer p
2   on s.name = p.name where p.sex="m" and p.salary>3000;
3
4
```

Below the SQL editor is a "Result Grid" window. It has a header row with columns: name, title, dev\_in, scost, dcost, sold. The data grid contains one row of data:

	name	title	dev_in	scost	dcost	sold
▶	somdutt	parachutes	basic	39967.95	6000	43

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following query:

```
1 •  select s.* from Software s join Programmer p on s.dev_in = prof1  
2     or s.dev_in = prof2 where s.dev_in = "pascal" and p.sex = "f";  
3  
4
```

Below the SQL editor is the result grid. It has a header row with columns: name, title, dev\_in, scost, dcost, sold. There are no data rows present in the grid.

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following query:

```
1 •  select * from Programmer where year(doj) < 1990;  
2
```

Below the SQL editor is the result grid. It has a header row with columns: name, dob, doj, sex, prof1, prof2, salary. There are no data rows present in the grid.

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a text area containing a SQL query:

```
1 •  SELECT s.*  
2   FROM Software s  
3   JOIN Programmer p ON s.name = p.name  
4   JOIN Studies st ON p.name = st.name  
5   WHERE st.place = 'PRAGATHI' AND p.sex = 'f' AND s.dev_in = 'C';  
6
```

Below the query is a results grid labeled "Result Grid". It has columns for name, title, dev\_in, scost, dcost, and sold. There are no rows displayed in the grid.

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

Commands

The screenshot shows the MySQL Workbench interface. At the top, there's a toolbar with various icons. Below it is a text area containing a SQL query:

```
1 •  SELECT p.name, st.place, COUNT(*) AS num_packages, SUM(s.sold) AS total_copies_sold, SUM(s.scost * s.sold) AS total_sales_value  
2   FROM Software s  
3   JOIN Programmer p ON s.name = p.name  
4   JOIN Studies st ON p.name = st.name  
5   GROUP BY p.name, st.place;  
6
```

Below the query is a results grid labeled "Result Grid". It has columns for name, splace, num\_packages, total\_copies\_sold, and total\_sales\_value. There are no rows displayed in the grid.

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

Commands:

```
2   FROM Software s
3   JOIN Programmer p ON s.name = p.name
4   JOIN Studies st ON p.name = st.name
5   WHERE st.splace = (SELECT splace FROM Studies GROUP BY splace ORDER BY COUNT(*) DESC LIMIT 1)
6   AND p.sex = 'm' AND s.dev_in = 'DBASE';
7
```

The screenshot shows the MySQL Workbench interface with the following details:  
Toolbar: Standard database management icons.  
Text Editor: The SQL query is pasted into the editor.  
Result Grid: A table titled "Result Grid" is displayed with the following columns: name, splace, num\_packages, total\_copies\_sold, and total\_sales\_value. There is one row of data: name is 'sowmiya', splace is 'parachutes', num\_packages is 1, total\_copies\_sold is 6000, and total\_sales\_value is 45.

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

Commands:

```
1 •  SELECT s.*
2   FROM Software s
3   JOIN Programmer p ON s.name = p.name
4   WHERE (p.sex = 'm' AND YEAR(p.dob) < 1965) OR (p.sex = 'f' AND YEAR(p.dob) > 1975);
5
```

The screenshot shows the MySQL Workbench interface with the following details:  
Toolbar: Standard database management icons.  
Text Editor: The SQL query is pasted into the editor, with the first line starting with a dot (•) indicating it's a continuation of the previous command.  
Result Grid: A table titled "Result Grid" is displayed with the following columns: name, title, dev\_in, scost, dcost, and sold. There is one row of data: name is 'sowmiya', title is 'parachutes', dev\_in is 'pascal', scost is 98765.89, dcost is 6000, and sold is 45.

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 •  SELECT s.*  
2   FROM Software s  
3   JOIN Programmer p ON s.name = p.name  
4 WHERE s.dev_in NOT IN (p.prof1, p.prof2);  
5
```

Below the code, the "Result Grid" tab is selected, showing the following data:

	name	title	dev_in	scost	dcost	sold
▶	sowmiya	parachutes	pascal	98765.89	6000	45

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 •  SELECT s.* FROM Software s  
2   JOIN Programmer p ON s.name = p.name  
3 WHERE s.dev_in NOT IN (p.prof1, p.prof2) AND s.dev_in NOT IN (p.prof1, p.prof2);  
4
```

Below the code, the "Result Grid" tab is selected, showing the following data:

	name	title	dev_in	scost	dcost	sold
▶	sowmiya	parachutes	pascal	98765.89	6000	45

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

Commands:

The screenshot shows a SQL editor window titled "SQL File 4". The query is:

```
1 •  SELECT s.*  
2   FROM Software s  
3   JOIN Programmer p ON s.name = p.name  
4   JOIN Studies st ON p.name = st.name  
5   WHERE st.place = 'SABHARI' AND p.sex = 'm';  
6
```

The result grid shows columns: name, title, dev\_in, scost, dcost, sold. There are no visible rows in the grid.

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

Commands:

The screenshot shows a SQL editor window titled "SQL File 4". The query is:

```
1 •  SELECT name FROM Programmer WHERE name NOT IN (SELECT DISTINCT name FROM Software);  
2
```

The result grid shows column: name. The data is:

name
kavila
sandy
sandy

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

Commands:

The screenshot shows a SQL editor window titled "SQL File 4". The query is:

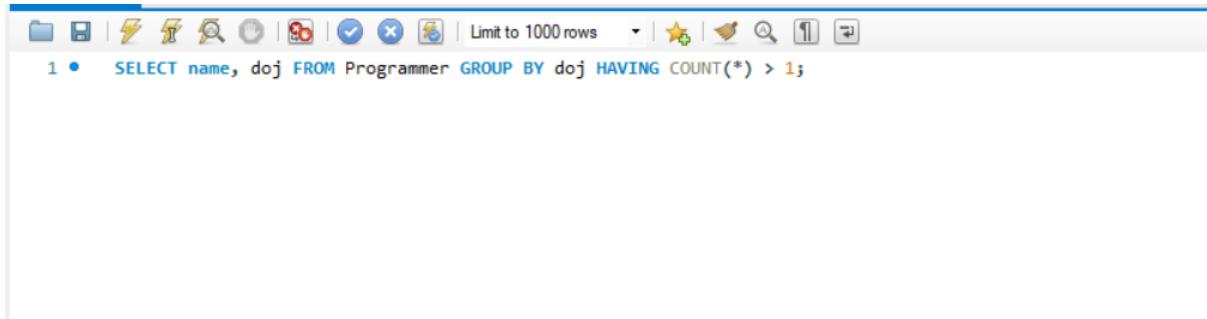
```
1 •  SELECT SUM(scost) AS total_cost FROM Software WHERE name IN (SELECT name FROM Programmer WHERE name LIKE '%APPLE%');  
2
```

The result grid shows column: total\_cost. The data is:

total_cost
HULL

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

Commands

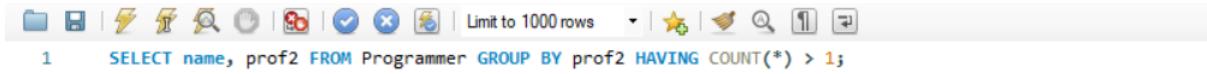


The screenshot shows a MySQL query editor window. The toolbar at the top includes icons for file operations, search, and database management. A dropdown menu says "Limit to 1000 rows". The main area contains a single SQL query:

```
1 •  SELECT name, DOJ FROM Programmer GROUP BY DOJ HAVING COUNT(*) > 1;
```

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

Commands:

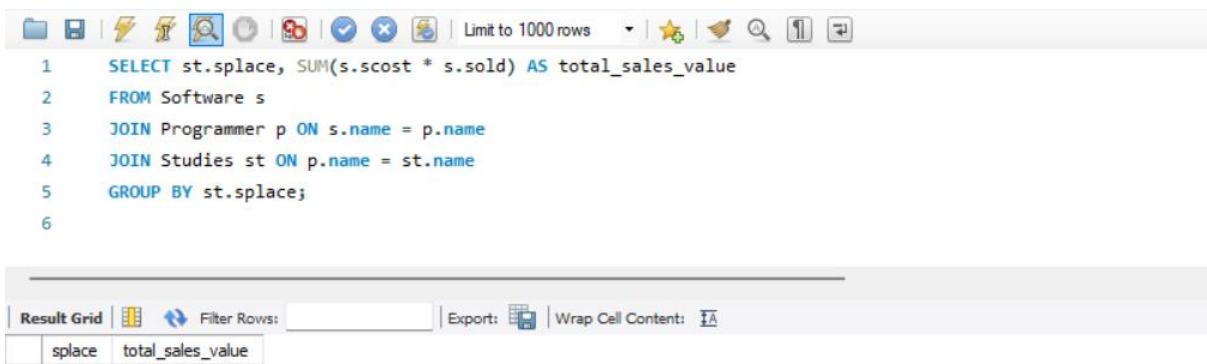


The screenshot shows a MySQL query editor window. The toolbar at the top includes icons for file operations, search, and database management. A dropdown menu says "Limit to 1000 rows". The main area contains a single SQL query:

```
1     SELECT name, prof2 FROM Programmer GROUP BY prof2 HAVING COUNT(*) > 1;
```

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

Commands:



The screenshot shows a MySQL query editor window. The toolbar at the top includes icons for file operations, search, and database management. A dropdown menu says "Limit to 1000 rows". The main area contains a multi-line SQL query:

```
1   SELECT st.splace, SUM(s.scost * s.sold) AS total_sales_value
2   FROM Software s
3   JOIN Programmer p ON s.name = p.name
4   JOIN Studies st ON p.name = st.name
5   GROUP BY st.splace;
6
```

Below the query, there is a "Result Grid" section with the following data:

splace	total_sales_value

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

Commands:

```
1 •  SELECT st.place
2   FROM Software s
3   JOIN Programmer p ON s.name = p.name
4   JOIN Studies st ON p.name = st.name
5   WHERE s.scost = (SELECT MAX(scost) FROM Software);
6
7
```

The screenshot shows a MySQL Workbench interface. The query editor contains the provided SQL code. Below the editor is a result grid labeled 'Result Grid' with a single row labeled 'place'. A message at the bottom indicates 'Result 455' rows.

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

Commands:

```
1 •  SELECT DISTINCT lang
2   FROM (
3     SELECT prof1 AS lang FROM Programmer
4     UNION
5     SELECT prof2 AS lang FROM Programmer
6   ) AS langs
7   WHERE lang NOT IN (SELECT dev_in FROM Software);
8
```

The screenshot shows a MySQL Workbench interface. The query editor contains the provided SQL code. Below the editor is a result grid labeled 'Result Grid' with a single row labeled 'lang' containing 'c' and 'c++'.

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 •  SELECT p.name, p.salary, st.course
2   FROM Programmer p
3   JOIN Software s ON p.name = s.name
4   JOIN Studies st ON p.name = st.name
5   WHERE s.sold = (SELECT MAX(sold) FROM Software);
6
```

Below the SQL editor is the result grid. It has a header row with columns labeled "name", "salary", and "course". There are no data rows present in the grid.

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

Commands:

The screenshot shows the MySQL Workbench interface. At the top, there is a toolbar with various icons. Below the toolbar, the SQL editor contains the following code:

```
1 •  SELECT p.name, ROUND(st.ccost / p.salary * 12) AS months_to_recover
2   FROM Programmer p
3   JOIN Studies st ON p.name = st.name;
4
```

Below the SQL editor is the result grid. It has a header row with columns labeled "name" and "months\_to\_recover". There are no data rows present in the grid.

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

Commands:

```
1 •  SELECT title FROM Software WHERE name IN (SELECT name FROM Programmer WHERE YEAR(CURRENT_DATE()) - YEAR(doJ) < 3) ORDER BY scost DESC LIMIT 1;
```

The screenshot shows the MySQL Workbench interface with a query editor window. The query is displayed in the top pane, and the results are shown in the bottom pane. The results table has one row with the title 'parachutes'.

title
parachutes

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

Commands:

```
1 •  SELECT AVG(salary) AS avg_salary FROM Programmer WHERE name IN (SELECT name FROM Software GROUP BY name HAVING SUM(scost * sold) > 50000);
```

The screenshot shows the MySQL Workbench interface with a query editor window. The query is displayed in the top pane, and the results are shown in the bottom pane. The results table has one row with the average salary '21600.0000'.

avg_salary
21600.0000

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

Commands:

```
1 •  SELECT COUNT(*) AS num_packages FROM Software WHERE name IN (SELECT name FROM Studies WHERE ccost = (SELECT MIN(ccost) FROM Studies));
```

The screenshot shows the MySQL Workbench interface with a query editor window. The query is displayed in the top pane, and the results are shown in the bottom pane. The results table has one row with the count '0'.

num_packages
0

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

Commands:

The screenshot shows the MySQL Workbench interface with a query editor and a results grid. The query is:

```
1 •  SELECT COUNT(*) AS num_packages, st.place
2   FROM Software s
3   JOIN Studies st ON s.name = st.name
4   WHERE scost = (SELECT MIN(scost) FROM Software)
5   GROUP BY st.place;
6
```

The results grid has columns for 'num\_packages' and 'place'. There is one row with the value '1' in the 'num\_packages' column and an empty string in the 'place' column.

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

Commands:

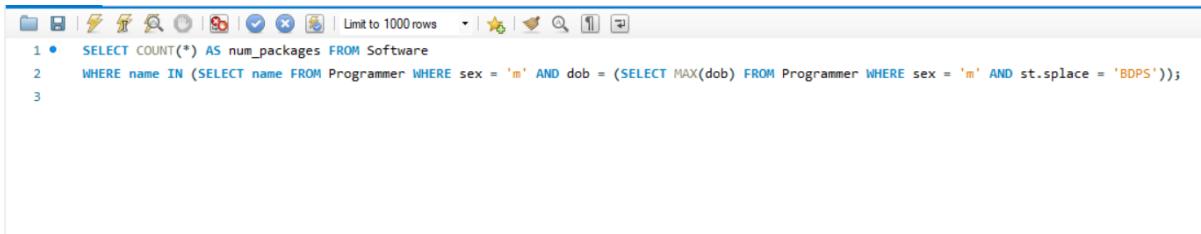
The screenshot shows the MySQL Workbench interface with a query editor and a results grid. The query is:

```
1 •  SELECT COUNT(*) AS num_packages FROM Software s
2   JOIN Programmer p ON s.name = p.name
3   WHERE p.sex = 'f' AND p.salary > (SELECT MAX(salary) FROM Programmer WHERE sex = 'm');
4
5
6
```

The results grid has a single row with the value '1' in the 'num\_packages' column.

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

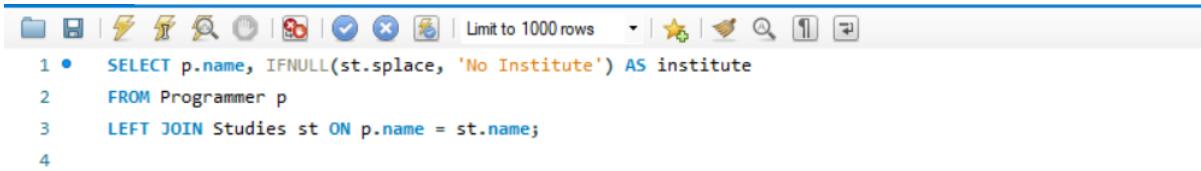
Commands:



```
1 •  SELECT COUNT(*) AS num_packages FROM Software
2   WHERE name IN (SELECT name FROM Programmer WHERE sex = 'm' AND dob = (SELECT MAX(dob) FROM Programmer WHERE sex = 'm' AND st.splace = 'BDPS'));
3
```

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

Commands:



```
1 •  SELECT p.name, IFNULL(st.splace, 'No Institute') AS institute
2   FROM Programmer p
3   LEFT JOIN Studies st ON p.name = st.name;
4
```

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

Commands:



```
1 •  SELECT prof, COUNT(DISTINCT p.name) AS num_programmers, COUNT(s.name) AS num_packages
2   FROM (
3     SELECT prof1 AS prof, name FROM Programmer
4     UNION ALL
5     SELECT prof2 AS prof, name FROM Programmer
6   ) AS profs
7   LEFT JOIN Software s ON profs.name = s.name
8   GROUP BY prof
9
```

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

Commands:



The screenshot shows the MySQL Workbench interface. The query editor at the top contains the following SQL code:

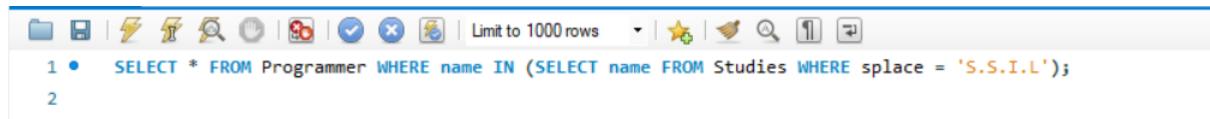
```
1 •  SELECT name, COUNT(*) AS num_packages FROM Software GROUP BY name;
2
3
4
```

The result grid below shows the output of the query:

name	num_packages
somdutt	1
sowmiya	1
sowmi	1

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

Commands:



The screenshot shows the MySQL Workbench interface. The query editor at the top contains the following SQL code:

```
1 •  SELECT * FROM Programmer WHERE name IN (SELECT name FROM Studies WHERE place = 'S.S.I.L');
2
```

The result grid below shows the output of the query:

name	dob	doj	sex	prof1	prof2	salary