

1> find sorted list of students in decreasing manner by their first name.

Select first\_name,last\_name from cf\_db.students order by first\_name desc

100 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, with 'cf\_db' expanded to show the 'students' table. The central 'Query Editor' contains the following SQL query:

```
1 select first_name, last_name from cf_db.students order by first_name DESC
```

The 'Data Output' tab shows the results of the query, displaying a table with two columns: 'first\_name' and 'last\_name'. The results are sorted in descending order by first name.

first_name	last_name
Zayb	Batra
Vishva	Singh
Vibhuti	Sharma
Vibhuti	Garg
Vanhi	Banerjee
Utkarsha	Kashyap
Tirath	Aganwal
Tejal	Kaur
Taru	Sharma

2> find list of competitions in order by highest to lowest winner price.

Select co\_name from cf\_db.competition order by win\_price desc

41 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, with 'cf\_db' expanded to show the 'competition' table. The central 'Query Editor' contains the following SQL query:

```
1 select co_name,win_price from cf_db.competition order by win_price DESC
```

The 'Data Output' tab shows the results of the query, displaying a table with two columns: 'co\_name' and 'win\_price'. The results are sorted in descending order by win price.

co_name	win_price
Roboclash	12000
Cricket	10000
DJ Wars	10000
BasketBall	8000
I.O.Hunt	7000
Raaga	7000
Showdown	6000
I.Decipher	6000
Volleyball	6000

### 3> Show the list of team ids which are winners of competitions (1st place)

Select count(team\_id) from cf\_db.winners where position='1'

19 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, with the 'winners' table under the 'cf\_db' database selected. The 'Columns (4)' section is expanded, showing 'team\_id' as a text column. The main pane shows the 'Query Editor' with the following SQL query:

```
1 select distinct(team_id) from cf_db.winners where position=1
```

The 'Data Output' tab is active, displaying the results of the query in a table with two columns: 'team\_id' (text) and 'count' (integer). The results are as follows:

team_id	count
11	6,1
12	2,3
13	7,3
14	7,2
15	1,3
16	5,1
17	1,1
18	5,3
19	7,1

### 4> Show list of winning teams with team's name, strength and position of teams

Select teams.t\_name, teams.t\_strength, winners.position from cf\_db.teams join cf\_db.winners on teams.team\_id=winners.team\_id and winners.position='1'

41 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, with the 'winners' table under the 'cf\_db' database selected. The 'Columns (4)' section is expanded, showing 'team\_id', 't\_name', 't\_strength', and 'position'. The main pane shows the 'Query Editor' with the following SQL query:

```
1 select teams.t_name, teams.t_strength, winners.position from cf_db.winners
2 join cf_db.teams on teams.team_id=winners.team_id and winners.position=1
```

The 'Data Output' tab is active, displaying the results of the query in a table with four columns: 't\_name' (text), 't\_strength' (integer), 'position' (integer), and 'count' (integer). The results are as follows:

t_name	t_strength	position	count
1 ITB A	4	1	1
2 ITB A	4	1	1
3 ITB A	4	1	1
4 ITB C	5	1	1
5 ITB C	5	1	1
6 ITD B	7	1	1
7 ITD B	7	1	1
8 ITD C	1	1	1
9 ITD C	1	1	1

A green message box at the bottom right indicates: 'Successfully run. Total query runtime: 107 msec. 41 rows affected.'

5> Find the list of 'Sports' competitions with name, date and starting time.

Select co\_name,date,time from cf\_db.competition join cf\_db.events on  
competition.e\_id=events.e\_id where e\_type='Sports'

9 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, including the 'competition' and 'events' tables. The central pane shows a SQL query in the Query Editor:

```
1 select competition.co_name,competition.date,competition.time from cf_db.events join cf_db.competition
2 on events.e_id=competition.e_id where events.e_type='Sports'
```

The 'Data Output' tab at the bottom displays the results of the query in a table with 9 rows:

co_name	date	time
Football	2019-11-...	8:00 AM
Cricket	2019-11-...	12:00 ...
Badminton	2019-11-...	4:00 PM
Volleyball	2019-11-...	10:00 ...
Tennis	2019-11-...	8:00 AM
Chess	2019-11-...	4:00 PM
Carrom	2019-11-...	10:00 ...
Table Tennis	2019-11-...	12:00 ...
BasketBall	2019-11-...	11:00 ...

A watermark 'Shantanu Tyagi' is visible on the right side of the screenshot.

6> Find the competition list which are held between '11-10-2019' and '13-10-2019' dates.

Select co\_name from cf\_db.competition where date between '10-11-2019' and '10-13-2019'

13 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, including the 'competition' table. The central pane shows a SQL query in the Query Editor:

```
1 select co_name from cf_db.competition
2 where date>='11-10-2019' and date<='13-10-2019'
```

The 'Data Output' tab at the bottom displays the results of the query in a table with 13 rows:

co_name
Blind C
Database
ICrypt
Roboclash
IO.Hunt
IDecipher
IBiz
IGanith
TreasureHunt

7> Find the student name which first name start from 'R'.

Select first\_name,last\_name from cf\_db.students where first\_name like 'R%'

13 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, including a table named 'students' under the 'cf\_db' schema. The main pane shows the 'Query Editor' with the following SQL query:

```
1 select first_name,last_name from cf_db.students
2 where first_name like 'R%'
```

The 'Data Output' tab shows the results of the query, which are 13 rows of student names starting with 'R'.

first_name	last_name
1	Ripujeet Agarwal
2	Roshan Mehta
3	Rusham Singh
4	Rajul Kaur
5	Roshan Verma
6	Raman Shah
7	Rut Jain
8	Roshan Banerjee
9	Raman Ahuja

8> Find the student name which first name start from 'R' or last name start from 'S'.

Select first\_name,last\_name from cf\_db.students where first\_name like 'R%' or last\_name like 'S%'

33 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, including a table named 'students' under the 'cf\_db' schema. The main pane shows the 'Query Editor' with the following SQL query:

```
1 select first_name,last_name from cf_db.students
2 where first_name like 'R%' or last_name like 'S%'
```

The 'Data Output' tab shows the results of the query, which are 33 rows of student names starting with 'R' or 'S'.

first_name	last_name
1	Pranil Shah
2	Kalpaka Shah
3	Ripujeet Agarwal
4	Kanak Shah
5	Roshan Mehta
6	Satya Shah
7	Meher Singh
8	Kanak Sharma
9	Vishva Singh

9> Find the student name which first name start from 'R' and not last name start from 'S'.

Select distinct(first\_name), last\_name from cf\_db.students where first\_name like 'R%' and last\_name not like 'S%'

10 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, including the 'students' table. The central pane shows a SQL query in the Query Editor:

```
1 select distinct(first_name), last_name from cf_db.students where first_name like 'R%' and last_name not like 'S%'
```

The bottom pane shows the 'Data Output' tab with the following results:

first_name	last_name
Rohan	Patel
Rupreet	Joshi
Roshan	Matta
Rohan	Sampat
Raman	Ahja
Rut	Jain
Rupreet	Chavla
Rupreet	Agarwal
Rajul	Kaur
Roshan	Verma

10> Show the list of competition name and their winning teams (1st place).

Select competition.co\_name, teams.t\_name from cf\_db.competition join cf\_db.winners on competition.co\_id=winners.co\_id join cf\_db.teams on winners.team\_id=teams.team\_id and winners.position='1'

41 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, including the 'competition' table. The central pane shows a SQL query in the Query Editor:

```
1 select competition.co_name, winners.team_id, teams.t_name
2 from cf_db.winners join cf_db.teams on winners.team_id=teams.team_id
3 join cf_db.competition on competition.co_id=winners.co_id where
4 winners.position=1
```

The bottom pane shows the 'Data Output' tab with the following results:

co_name	team_id	t_name
I.Relay	1,1	IITB A
INC	1,1	IITB A
Battle Of Band	1,1	IITB A
Raaga	1,3	IITB C
DJ Wars	1,3	IITB C
Googlock Hol...	2,2	IITD B
BattleDrome	2,2	IITD B
I.Biz	2,3	IITD C
I.Crypt	2,3	IITD C

### 11> Show list of colleges names with no of participants students of respective colleges.

Select count(students.c\_id),college.c\_name from cf\_db.students join cf\_db.college on students.c\_id=college.c\_id group by college.c\_id

9 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, with the 'competition' table selected. The main pane shows a SQL query in the Query Editor:

```
1 select count(students.s_id), college.c_id, college.c_name
2 from cf_db.students join cf_db.college
3 on college.c_id=students.c_id group by college.c_id
```

The Data Output pane shows the results of the query:

count	c_id	c_name
bigint	[PK] integer	text
11	4	Indian Instit...
7	6	Birla Instit...
10	2	Indian Instit...
10	9	National Ins...
12	7	Dhirubhai A...
15	3	Indian Instit...
11	1	Indian Instit...
14	5	Indian Instit...
10	8	Internationa...

A black box with the text '2018 01030' is visible on the right side of the Data Output pane.

### 12> Find out list that contain events name with their respective no of competitions counts.

Select count(distinct competition.co\_name),events.e\_name from cf\_db.competition join cf\_db.events on competition.e\_id=events.e\_id group by events.e\_name

3 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database structure, with the 'events' table selected. The main pane shows a SQL query in the Query Editor:

```
1 select count(competition.co_id), events.e_name
2 from cf_db.competition join cf_db.events
3 on competition.e_id=events.e_id group by events.e_name
```

The Data Output pane shows the results of the query:

count	e_name
bigint	text
9	Concours
19	Synapse
13	IFest

A black box with the text 'Vatsal Gujarati' is visible on the right side of the Data Output pane.

**13> Show list of collages names with no of participants students of respective colleges greater than 10.**

Create view q13 as select count(students.s\_id),college.c\_name from cf\_db.students join cf\_db.college on students.c\_id=college.c\_id group by college.c\_name  
Select \* from q13 where count>10

**5 rows**

The screenshot shows the pgAdmin 4 interface. In the Query Editor, the following SQL is entered:

```
1 create view q13 as select count(students.s_id), college.c_name
2 from cf_db.students join cf_db.college
3 on college.c_id=students.c_id group by college.c_id
4
5 select * from q13 where count>10
```

The Data Output tab shows the following results:

count bigint	c_id integer	c_name text
11	4	Indian Instit...
12	7	Dhruvhal A...
15	3	Indian Instit...
11	1	Indian Instit...
14	5	Indian Instit...

**14> Find the list of team's ids with number of time wining for different competitions and which are winners of more than 3 competitions (consider top 3 place)**

Create view q14 as select count(winners.position),team\_id from cf\_db.winners group by team\_id  
Select \* from q14 where count>3 order by count desc limit 3

**3 rows**

The screenshot shows the pgAdmin 4 interface. In the Query Editor, the following SQL is entered:

```
1 create view q14b as select count(position), team_id
2 from cf_db.winners
3 group by team_id order by count(position) desc
4
5 select * from q14b where count>3 limit 3
6
```

The Data Output tab shows the following results:

count bigint	team_id text
6	2,3
4	9,1
4	7,1

15> Find the list of dates with no of competitions held respective dates (date, no\_of\_competitions)

Select date,count(co\_id) from cf\_db.competition group by competition.date

10 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database schema for 'cf\_db', including tables like 'college', 'competition', 'events', 'students', 'teams', and 'winners'. The 'winners' table is selected, showing its columns: 'co\_id', 'team\_id', 'e\_id', and 'position'. The main pane shows a SQL query in the 'Query Editor':

```
1 select count(co_id),date from cf_db.competition group by date
```

The 'Data Output' tab shows the results of the query:

count	date
2	2019-11-08
3	2020-02-21
4	2020-02-23
5	2019-10-08
6	2020-02-24
7	2019-11-07
8	2019-10-13
9	2019-10-12
10	2019-11-09

A status message at the bottom right indicates: 'Successfully run. Total query runtime: 131 msec. 10 rows affected.'

16> Find the list of dates with no of competitions held respective dates (date, no\_of\_competitions) and respective events names.

Select competition.date,count(competition.co\_id),events.e\_name from cf\_db.competition join cf\_db.events on competition.e\_id=events.e\_id group by competition.date,events.e\_name

10 rows

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the database schema for 'cf\_db'. The main pane shows a SQL query in the 'Query Editor':

```
1 select count(competition.co_id),events.e_name,
2 competition.date from cf_db.competition
3 join cf_db.events on competition.e_id=events.e_id
4 group by competition.date,events.e_name
```

The 'Data Output' tab shows the results of the query:

count	e_name	date
2	Synapse	2020-02-21
3	Synapse	2020-02-23
4	Concours	2019-11-08
5	iFest	2019-10-11
6	Synapse	2020-02-24
7	Concours	2019-11-07
8	iFest	2019-10-13
9	iFest	2019-10-12
10	Concours	2019-11-09

A status message at the bottom right indicates: 'Successfully run. Total query runtime: 131 msec. 10 rows affected.'



17> Find the team id which are most times winners of competitions (consider top 3 place for winners)

Select team\_id from q14 where count=(select max(count) from q14)

1 row

The screenshot shows the pgAdmin 4 interface. On the left, the 'Schemas' tree is expanded to show the 'cf\_db' database, which contains several tables including 'winners'. The 'Query Editor' is open, displaying the following SQL query:

```
1 select team_id from q14b where count=(select max(count) from q14b)
2
```

The 'Data Output' tab shows the result of the query, which is a single row with the team\_id '2,3'.

team_id
2,3

A watermark 'Shantanu Tyagi' is visible in the bottom right corner of the interface.

18> Find the team ids which are not winners of any competitions (consider top 3 place for winners).

Select team\_id from cf\_db.teams except select distinct winners.team\_id from cf\_db.winners

2 rows

The screenshot shows the pgAdmin 4 interface. On the left, the 'Schemas' tree is expanded to show the 'cf\_db' database, which contains several tables including 'winners'. The 'Query Editor' is open, displaying the following SQL query:

```
1 select teams.team_id from cf_db.teams except select distinct winners.team_id
2 from cf_db.winners
```

The 'Data Output' tab shows the result of the query, which is two rows with team\_ids '3,2' and '9,2'.

team_id
3,2
9,2

A watermark 'Vatsal Gujarati' is visible in the bottom right corner of the interface.

### 19> Find the competition name which have second highest wining price.

Select co\_name from cf\_db.competition where win\_price=(select max(win\_price) from cf\_db.competition where win\_price<(select max(win\_price) from cf\_db.competition))

2 rows

The screenshot shows the pgAdmin 4 interface. On the left, the 'Schemas' tree is expanded to 'cf\_db', and the 'Tables' list includes 'winners'. The 'Query Editor' is active, showing the following SQL query:

```
1 SELECT co_name
2 FROM cf_db.competition
3 WHERE win_price = (SELECT max(win_price)
4 FROM cf_db.competition
5 WHERE win_price < ( SELECT MAX( win_price )
6 FROM cf_db.competition))
7
```

The 'Data Output' tab shows the results of the query:

co_name
DJ Wars
Cricket

The status bar at the bottom right indicates '2018 01030'.

### 20> Find the list of events with highest wining price of their respective event's competitions

Select events.e\_name max(competition.win\_price) from cf\_db.events join cf\_db.competition on events.e\_id=competition.e\_id group by events.e\_name order by max(competition.win\_price) desc

3 rows

The screenshot shows the pgAdmin 4 interface. On the left, the 'Schemas' tree is expanded to 'cf\_db', and the 'Tables' list includes 'winners'. The 'Query Editor' is active, showing the following SQL query:

```
1 SELECT events.e_name,max(competition.win_price) from cf_db.events join
2 cf_db.competition on competition.e_id=events.e_id
3 group by (events.e_name)
4
```

The 'Data Output' tab shows the results of the query:

e_name	max
Concours	10000
Synapse	10000
iFest	12000

The status bar at the bottom right indicates '1306' and '12-09-2020'.