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Queries

1. Create a table named ‘matches’ with appropriate data types for columns

```
-- Table: public.deliveries
-- DROP TABLE IF EXISTS public.deliveries;
CREATE TABLE IF NOT EXISTS public.deliveries
(
    id integer NOT NULL,
    inning integer NOT NULL,
    over integer,
    ball integer,
    batsman character varying COLLATE pg_catalog."default",
    non_striker character varying COLLATE pg_catalog."default",
    bowler character varying COLLATE pg_catalog."default",
    batsman_runs integer,
    extra_runs integer,
    total_runs integer,
    is_wicket integer,
    dismissal_kind character varying COLLATE pg_catalog."default",
    player_dismissed character varying COLLATE pg_catalog."default",
    fielder character varying COLLATE pg_catalog."default",
    extras_type character varying COLLATE pg_catalog."default",
    batting_team character varying COLLATE pg_catalog."default",
    bowling_team character varying COLLATE pg_catalog."default",
    CONSTRAINT "FK_MATCH_ID" FOREIGN KEY (id)
        REFERENCES public.matches ("ID") MATCH SIMPLE
        ON UPDATE NO ACTION
        ON DELETE NO ACTION
        NOT VALID
)

TABLESPACE pg_default;

ALTER TABLE IF EXISTS public.deliveries
    OWNER to postgres;
```

2. Create a table named ‘deliveries’ with appropriate data types for columns

```
-- Table: public.matches
-- DROP TABLE IF EXISTS public.matches;
CREATE TABLE IF NOT EXISTS public.matches
(
```

```
    id integer NOT NULL,
    city character varying COLLATE pg_catalog."default",
    date date,
    player_of_match character varying COLLATE pg_catalog."default",
    venue character varying COLLATE pg_catalog."default",
    neutral_venue integer,
    team1 character varying COLLATE pg_catalog."default",
    team2 character varying COLLATE pg_catalog."default",
    toss_winner character varying COLLATE pg_catalog."default",
    toss_decision character varying COLLATE pg_catalog."default",
    winner character varying COLLATE pg_catalog."default",
    result character varying COLLATE pg_catalog."default",
    result_margin integer,
    eliminator "char",
    method character varying COLLATE pg_catalog."default",
    umpire1 character varying COLLATE pg_catalog."default",
    umpire2 character varying COLLATE pg_catalog."default",
    CONSTRAINT "IPL_MATCH_pkey" PRIMARY KEY (id)
)

TABLESPACE pg_default;

ALTER TABLE IF EXISTS public.matches
    OWNER to postgres;
```

3. Select the top 20 rows of the *deliveries* table after ordering them by id, inning, over, ball in ascending order.

```
select
        *
from
        deliveries
order by
         id, inning, over, ball asc
limit 20;
```

	id integer	inning integer	over integer	ball integer	batsman character varying	non_striker character varying	bowler character varying	batsman_runs integer	extra_runs integer
1	335982	1	0	1	SC Ganguly	BB McCullum	P Kumar	0	1
2	335982	1	0	2	BB McCullum	SC Ganguly	P Kumar	0	0
3	335982	1	0	3	BB McCullum	SC Ganguly	P Kumar	0	1
4	335982	1	0	4	BB McCullum	SC Ganguly	P Kumar	0	0
5	335982	1	0	5	BB McCullum	SC Ganguly	P Kumar	0	0
6	335982	1	0	6	BB McCullum	SC Ganguly	P Kumar	0	0
7	335982	1	0	7	BB McCullum	SC Ganguly	P Kumar	0	1
8	335982	1	1	1	BB McCullum	SC Ganguly	Z Khan	0	0
9	335982	1	1	2	BB McCullum	SC Ganguly	Z Khan	4	0
10	335982	1	1	3	BB McCullum	SC Ganguly	Z Khan	4	0
11	335982	1	1	4	BB McCullum	SC Ganguly	Z Khan	6	0
12	335982	1	1	5	BB McCullum	SC Ganguly	Z Khan	4	0
13	335982	1	1	6	BB McCullum	SC Ganguly	Z Khan	0	0
14	335982	1	2	1	SC Ganguly	BB McCullum	P Kumar	0	0
15	335982	1	2	2	SC Ganguly	BB McCullum	P Kumar	0	0
16	335982	1	2	3	SC Ganguly	BB McCullum	P Kumar	0	1
17	335982	1	2	4	BB McCullum	SC Ganguly	P Kumar	4	0
18	335982	1	2	5	BB McCullum	SC Ganguly	P Kumar	1	0
19	335982	1	2	6	SC Ganguly	BB McCullum	P Kumar	0	0
20	335982	1	3	1	BB McCullum	SC Ganguly	AA Noffke	0	5

4. Fetch data of all the matches played on 2nd May 2013 from the *matches* table..

```
select
        *
from
        matches
where
        to_char(date,'ddmmyy') = '020513';
```

```
select * from matches
where to_char(date,'ddmmyy') = '020513';
```

Data Output Messages Notifications

	id [PK] integer	city character varying	date date	player_of_match character varying	venue character varying	neutral_venue integer	team1 character varying	team2 character varying
1	598041	Chennai	2013-05-02	SK Raina	MA Chidambaram Stadium, Chepauk	0	Chennai Super Kings	Kings XI Punjab
2	598042	Pune	2013-05-02	AB de Villiers	Subrata Roy Sahara Stadium	0	Pune Warriors	Royal Challengers Bangalore

5. Fetch data of all the matches where the result mode is ‘runs’ and margin of victory is more than 100 runs.

```
select
        *
from
        matches
where
```

```
result = 'runs' and result_margin > 100;
```

Data Output Messages Notifications

	toss_winner character varying	toss_decision character varying	winner character varying	result character varying	result_margin integer	eliminator "char"	method character varying	umpire1 character varying	umpire2 character va
1	Royal Challengers Bangalore	field	Kolkata Knight Riders	runs	140	N	NA	Asad Rauf	RE Koertzer
2	Delhi Daredevils	field	Rajasthan Royals	runs	105	N	NA	BF Bowden	RE Koertzer
3	lore Kings XI Punjab	bat	Kings XI Punjab	runs	111	N	NA	Asad Rauf	AM Saheba
4	Pune Warriors	field	Royal Challengers Bangalore	runs	130	N	NA	Aleem Dar	C Shamshu
5	Kings XI Punjab	field	Royal Challengers Bangalore	runs	138	N	NA	RK Illingworth	VA Kulkarni
6	Gujarat Lions	field	Royal Challengers Bangalore	runs	144	N	NA	AY Dandekar	VK Sharma
7	Delhi Daredevils	field	Mumbai Indians	runs	146	N	NA	Nitin Menon	CK Nandan
8	Kolkata Knight Riders	field	Mumbai Indians	runs	102	N	NA	KN Ananthapadmanabhan	AK Chaudh
9	lore Royal Challengers Bangalore	field	Sunrisers Hyderabad	runs	118	N	NA	KN Ananthapadmanabhan	S Ravi

6. Fetch data of all the matches where the final scores of both teams tied and order it in descending order of the date

```
select
        *
from
        matches
where
        result = 'tie'
order by
        date desc;
```

Data Output Messages Notifications

	e cter varying	neutral_venue integer	team1 character varying	team2 character varying	toss_winner character varying	toss_decision character varying	winner character varying	result character va
2	h Zayed Stadium	0	Kolkata Knight Riders	Sunrisers Hyderabad	Sunrisers Hyderabad	field	Kolkata Knight Riders	tie
3	i International Cricket Stadium	0	Royal Challengers Bangalore	Mumbai Indians	Mumbai Indians	field	Royal Challengers Bangalore	tie
4	i International Cricket Stadium	0	Delhi Capitals	Kings XI Punjab	Kings XI Punjab	field	Delhi Capitals	tie
5	khede Stadium	0	Mumbai Indians	Sunrisers Hyderabad	Mumbai Indians	bat	Mumbai Indians	tie
6	z Shah Kotla	0	Delhi Capitals	Kolkata Knight Riders	Delhi Capitals	field	Delhi Capitals	tie
7	ashtra Cricket Association Stadium	0	Gujarat Lions	Mumbai Indians	Gujarat Lions	bat	Mumbai Indians	tie
8	ar Patel Stadium, Motera	0	Rajasthan Royals	Kings XI Punjab	Kings XI Punjab	field	Kings XI Punjab	tie
9	h Zayed Stadium	1	Kolkata Knight Riders	Rajasthan Royals	Rajasthan Royals	bat	Rajasthan Royals	tie
10	innaswamy Stadium	0	Royal Challengers Bangalore	Delhi Daredevils	Royal Challengers Bangalore	field	Royal Challengers Bangalore	tie
11	Gandhi International Stadium, Uppal	0	Sunrisers Hyderabad	Royal Challengers Bangalore	Royal Challengers Bangalore	bat	Sunrisers Hyderabad	tie
12	Chidambaram Stadium, Chepauk	0	Chennai Super Kings	Kings XI Punjab	Chennai Super Kings	field	Kings XI Punjab	tie

7. Get the count of cities that have hosted an IPL match.

```
select
        count(distinct City)
from
        matches;
```

Data Output Messages Notifications

	count bigint
1	33

8. Write a query to fetch the total number of boundaries and dot balls from the *deliveries_v02* table.

```
select
        ball_result,count(*)
from
        deliveries_v02
where
        ball_result in ('Dot','Four','Six')
group by
        ball_result;
```

Data Output Messages Notifications

	ball_result character varying	count bigint
1	Dot	67841
2	Four	22187
3	Six	8850

9. Write a query to fetch the total number of boundaries scored by each team from the *deliveries_v02* table and order it in descending order of the number of boundaries scored.

```
select
        batting_Team,ball_result,count(*) as Boundaries
from
        deliveries_v02
where
```

```
        ball_result in ('Four','Six')
group by
        batting_Team,ball_result
order by
        Ball_result Desc, Boundaries desc;
```

Data Output Messages Notifications

	batting_team character varying	ball_result character varying	boundaries bigint
9	Deccan Chargers	Six	397
10	Pune Warriors	Six	195
11	Delhi Capitals	Six	175
12	Gujarat Lions	Six	155
13	Rising Pune Supergiant	Six	89
14	Rising Pune Supergiants	Six	68
15	Kochi Tuskers Kerala	Six	51
16	Mumbai Indians	Four	2838
17	Kings XI Punjab	Four	2672
18	Kolkata Knight Riders	Four	2664
19	Royal Challengers Bangalore	Four	2565
20	Chennai Super Kings	Four	2403
21	Rajasthan Royals	Four	2223
22	Delhi Daredevils	Four	2178

10. Write a query to fetch the total number of dot balls bowled by each team and order it in descending order of the total number of dot balls bowled.

```
select
        bowling_Team,ball_result,count(*) as Dots
from
        deliveries_v02
where
        ball_result in ('Dot')
group by
        bowling_Team,ball_result
order by
        Dots desc;
```

Data Output Messages Notifications

	bowling_team character varying	ball_result character varying	dots bigint
1	Mumbai Indians	Dot	8714
2	Royal Challengers Bangalore	Dot	7955
3	Kolkata Knight Riders	Dot	7894
4	Kings XI Punjab	Dot	7679
5	Chennai Super Kings	Dot	7593
6	Rajasthan Royals	Dot	6665
7	Delhi Daredevils	Dot	6520
8	Sunrisers Hyderabad	Dot	5248
9	Deccan Chargers	Dot	3306
10	Pune Warriors	Dot	1900

11. Write a query to fetch the total number of dismissals by dismissal kinds where dismissal kind is not NA

```
select
        count(*)
from
        deliveries
where
        dismissal_kind = 'NA';
```

Data Output Messages Notifi

	count bigint
1	183973

12. Write a query to get the top 5 bowlers who conceded maximum extra runs from the *deliveries* table

```
select
        Bowler, sum(Extra_Runs) as Total_Extras
from
```

```
        deliveries
group by
        Bowler
order by
        Total_Extras desc
limit 5;
```

Data Output Messages Notifications

	bowler character varying	total_extras bigint
1	SL Malinga	293
2	P Kumar	236
3	UT Yadav	226
4	DJ Bravo	210
5	B Kumar	201

13. Write a query to create a table named *deliveries_v03* with all the columns of *deliveries_v02* table and two additional column (named *venue* and *match_date*) of *venue* and *date* from table *matches*

```
create table deliveries_v03 as
select * from deliveries_v02
where 1 = 2

alter table deliveries_v03
add column venue character varrying;

alter table deliveries_v03
add column  Match_date Date;

insert into deliveries_v03
select d.*,m.venue,m.date
from deliveries_v02 as d inner join
matches m on m.id = d.id;
```

14. Write a query to fetch the total runs scored for each venue and order it in the descending order of total runs scored.

```
select
        venue, sum(total_runs)
from
        deliveries_v03
group by
        venue
order by
        sum(total_runs) desc;

select
        venue, sum(total_runs)
from
        deliveries d inner join matches m
        on  m.id = d.id
group by
        venue
order by
        sum(total_runs) desc;
```

15. Write a query to fetch the year-wise total runs scored at *Eden Gardens* and order it in the descending order of total runs scored.

```
select
        to_char(Match_date,'yyyy'),sum(total_runs)
from
        deliveries_v03
where
        venue = 'Eden Gardens'
group by
        to_char(Match_date,'yyyy');

select
        to_char(date,'yyyy'),sum(total_runs)
from
        deliveries d inner join matches m
        on  m.id = d.id
where
        venue = 'Eden Gardens'
group by
        to_char(date,'yyyy');
```

Data Output Messages Notifications

	to_char text	sum bigint
1	2008	1843
2	2010	2167
3	2011	1854
4	2012	2012
5	2013	2304
6	2014	1289
7	2015	2386
8	2016	2073
9	2017	2194
10	2018	2885
11	2019	2651

16. Get unique team1 names from the *matches* table, you will notice that there are two entries for *Rising Pune Supergiant* one with *Rising Pune Supergiant* and another one with *Rising Pune Supergiant**s***. Your task is to create a *matches_corrected* table with two additional columns *team1_corr* and *team2_corr* containing team names with replacing *Rising Pune Supergiant**s*** with *Rising Pune Supergiant*. Now analyse these newly created columns.

```
update matches
set team1 = 'Rising Pune Supergiant',
team2 = 'Rising Pune Supergiant'
where
team1 = 'Rising Pune Supergiants'
or
team2 = 'Rising Pune Supergiants';
```

17. Create a new table deliveries_v04 with the first column as ball_id containing information of match_id, inning, over and ball separated by '-' (For ex. 335982-1-0-1 match_id-inning-over-ball) and rest of the columns same as deliveries_v03)

```
insert into deliveries_v04
```

```
select *, concat(id,'-',inning,'-',over,'-',ball)
from deliveries_v03;
```

18. Compare the total count of rows and total count of distinct ball_id in deliveries_v04

```
select count(*) total_count ,count(distinct ball_id) ballid_count
from deliveries_v04;
```

Data Output Messages Notifications

	total_count bigint	ballid_count bigint
1	193468	193458