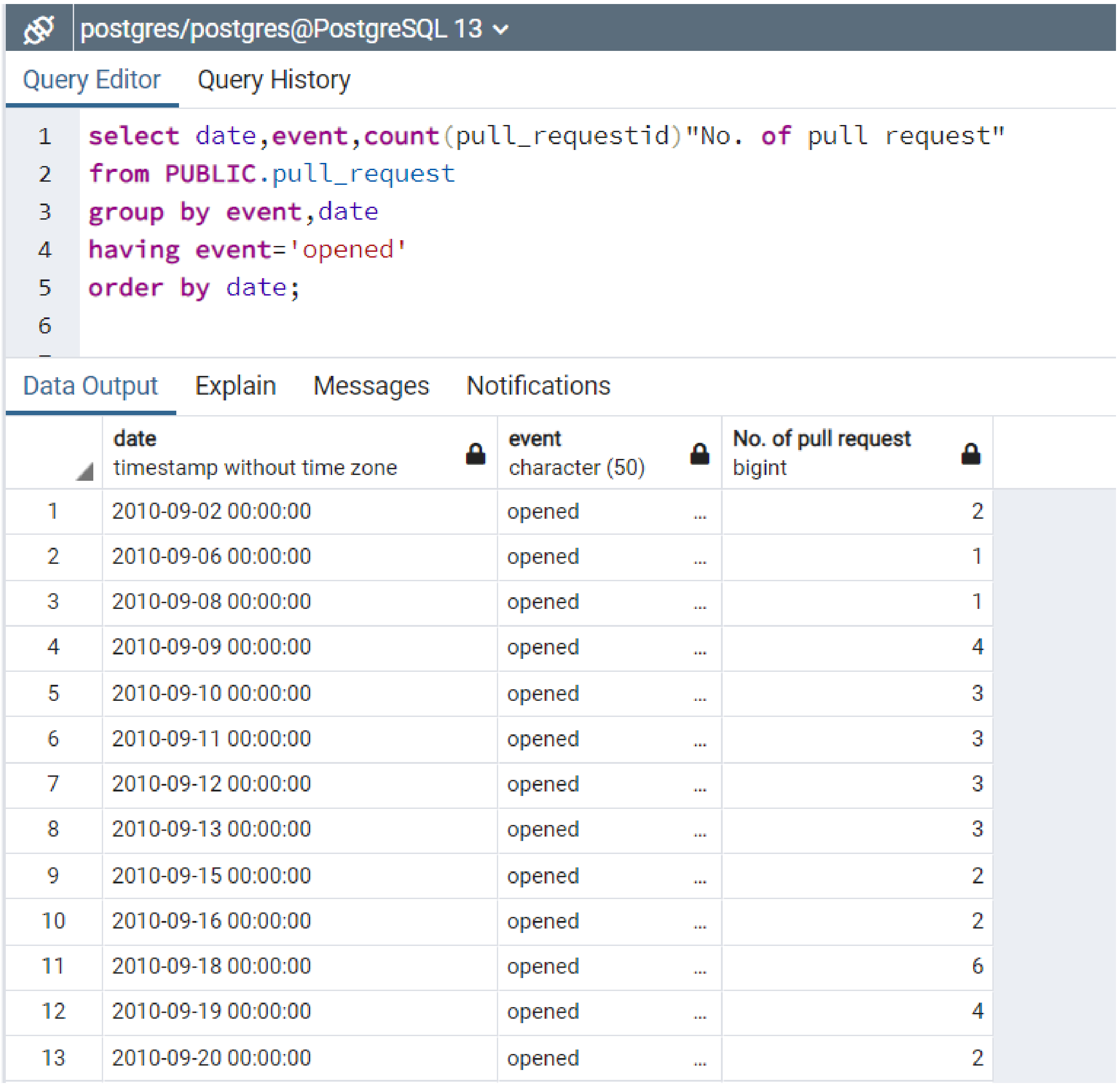
BDA ASSIGNMENT - 1

Name - Tanishq (2018199), Vipul (2018118)

QUERIES -
1(a).
select date,event,count(pull_requestid)"No. of pull request"
from PUBLIC.pull_request
group by event,date
having event='opened'
order by date;

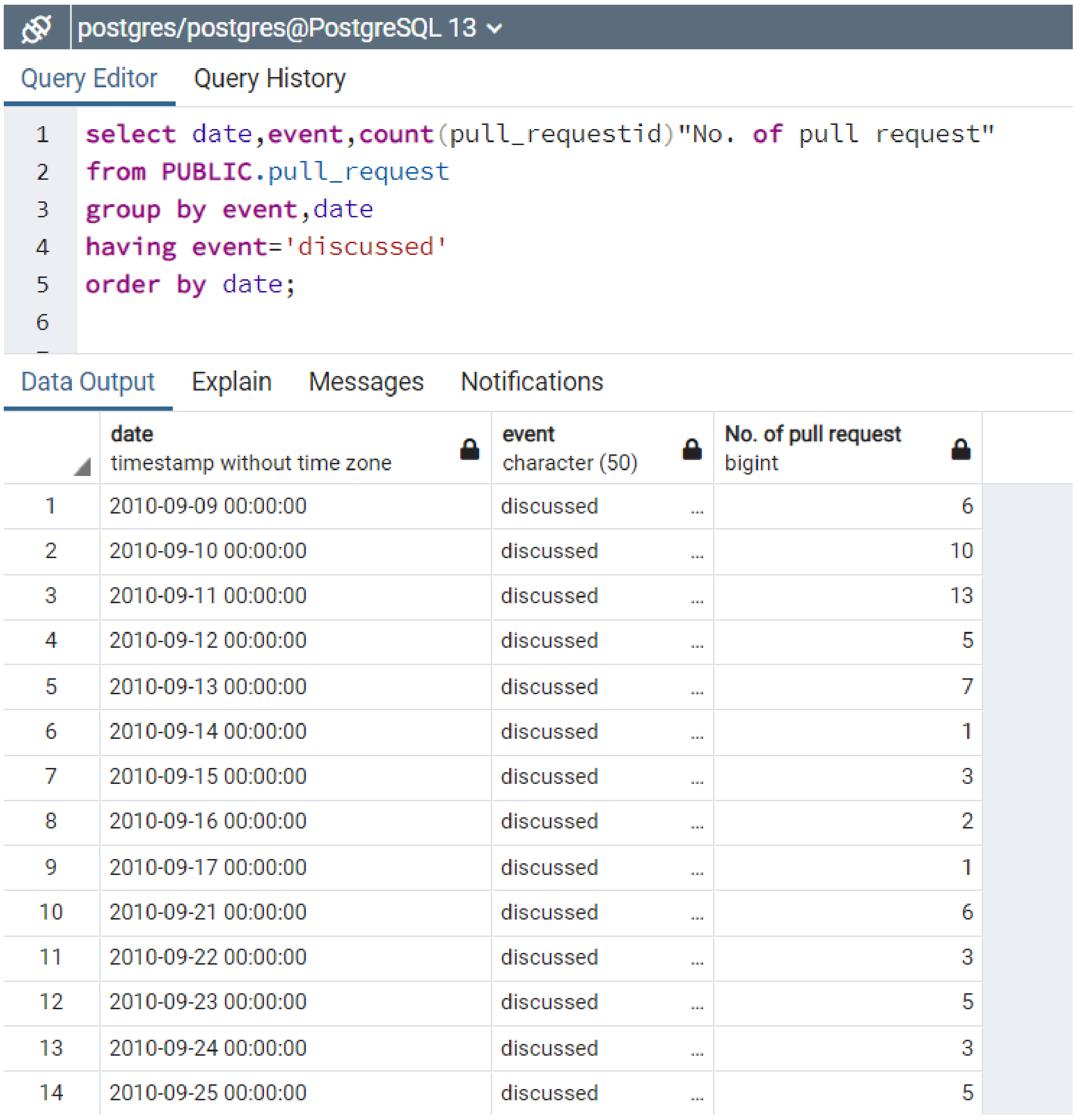


```
select date,event,count(pull_requestid)"No. of pull request"
from PUBLIC.pull_request
group by event,date
having event='opened'
order by date;
```

	date timestamp without time zone	event character (50)	No. of pull request bigint
1	2010-09-02 00:00:00	opened ...	2
2	2010-09-06 00:00:00	opened ...	1
3	2010-09-08 00:00:00	opened ...	1
4	2010-09-09 00:00:00	opened ...	4
5	2010-09-10 00:00:00	opened ...	3
6	2010-09-11 00:00:00	opened ...	3
7	2010-09-12 00:00:00	opened ...	3
8	2010-09-13 00:00:00	opened ...	3
9	2010-09-15 00:00:00	opened ...	2
10	2010-09-16 00:00:00	opened ...	2
11	2010-09-18 00:00:00	opened ...	6
12	2010-09-19 00:00:00	opened ...	4
13	2010-09-20 00:00:00	opened ...	2

Methodology:
Here we selected three columns named date,events which contain the status (example : opened , discussed , merged) and no.of pull request, we counted all the pull requests of every date which was having the comment opened.

1 (b).
select date,event,count(pull_requestid)"No. of pull request"
from PUBLIC.pull_request
group by event,date
having event='discussed'
order by date;



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Query Editor Query History

```
select date,event,count(pull_requestid)"No. of pull request"
from PUBLIC.pull_request
group by event,date
having event='discussed'
order by date;
```

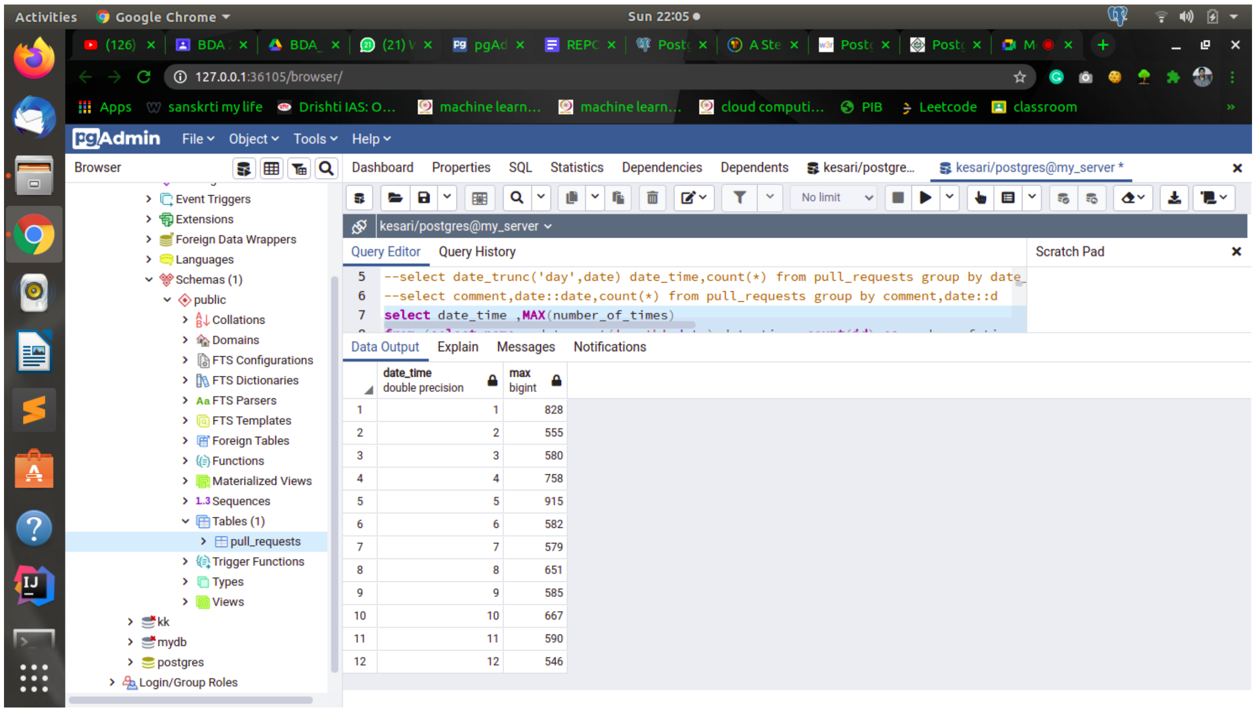
Data Output Explain Messages Notifications

	date timestamp without time zone	event character (50)	No. of pull request bigint
1	2010-09-09 00:00:00	discussed	6
2	2010-09-10 00:00:00	discussed	10
3	2010-09-11 00:00:00	discussed	13
4	2010-09-12 00:00:00	discussed	5
5	2010-09-13 00:00:00	discussed	7
6	2010-09-14 00:00:00	discussed	1
7	2010-09-15 00:00:00	discussed	3
8	2010-09-16 00:00:00	discussed	2
9	2010-09-17 00:00:00	discussed	1
10	2010-09-21 00:00:00	discussed	6
11	2010-09-22 00:00:00	discussed	3
12	2010-09-23 00:00:00	discussed	5
13	2010-09-24 00:00:00	discussed	3
14	2010-09-25 00:00:00	discussed	5

Methodology:Here we selected three columns named date, event which contains the status (example : opened , discussed , merged) and no.of pull request, we counted all the pull requests of every date which was having the comment discussed.

2.

select date_time ,MAX(number_of_times)
from (select name , date_part('month',date) date_time ,count(id) as number_of_times
  from pull_requests
  where comment='discussed'
  group by name, date_time) as deliveer
  group by date_time order by date_time;



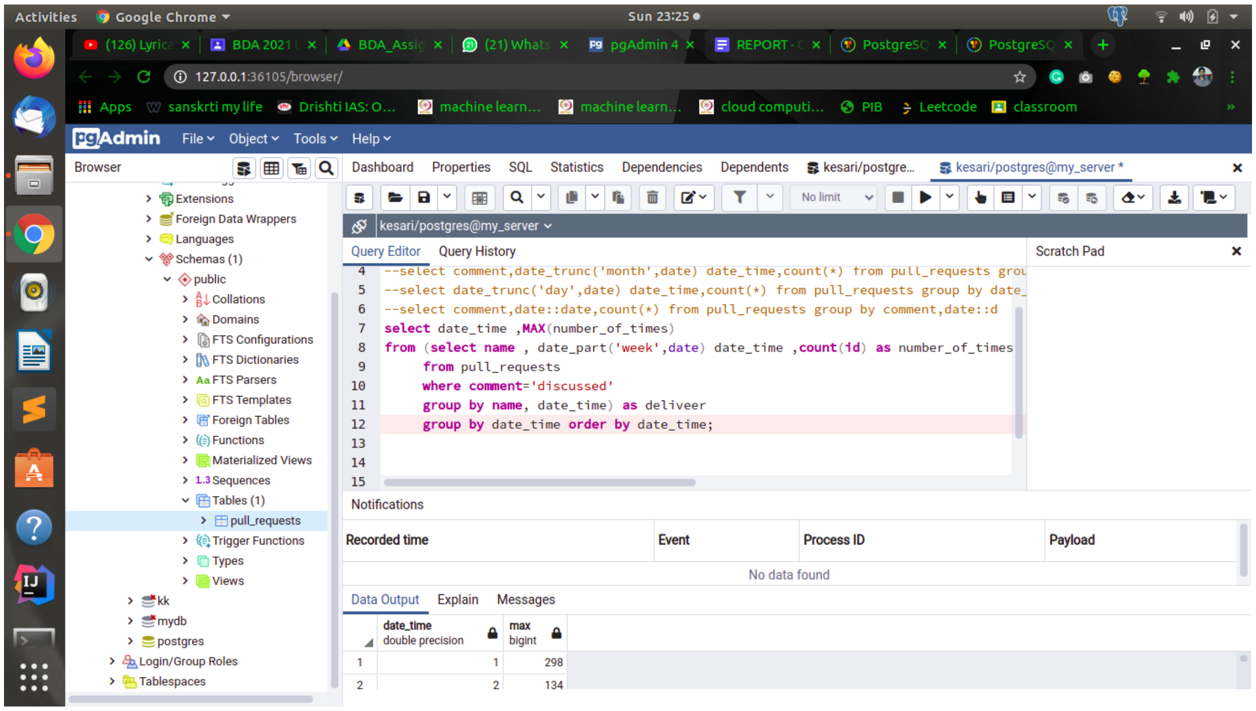
```
--select date_trunc('day',date) date_time,count(*) from pull_requests group by date_
--select comment,date::date,count(*) from pull_requests group by comment,date::d
select date_time ,MAX(number_of_times)
```

	date_time double precision	max bigint
1	1	828
2	2	555
3	3	580
4	4	758
5	5	915
6	6	582
7	7	579
8	8	651
9	9	585
10	10	667
11	11	590
12	12	546

Methodology:- Here i use the nested select command to get the result. I first counted the comments in a month and then i counted the max among them.

3.

select date_time ,MAX(number_of_times)
from (select name , date_part('week',date) date_time ,count(id) as number_of_times
  from pull_requests
  where comment='discussed'
  group by name, date_time) as deliveer
  group by date_time order by date_time;

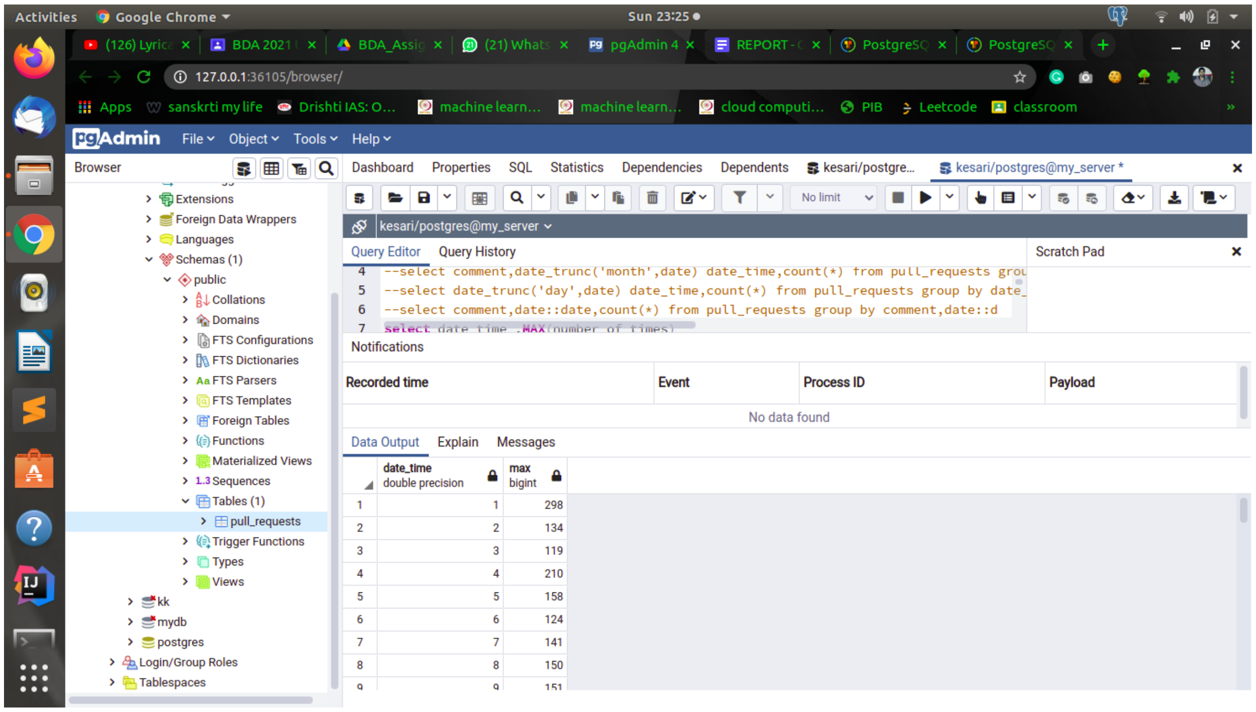


```
--select comment,date_trunc('month',date) date_time,count(*) from pull_requests grou
--select date_trunc('day',date) date_time,count(*) from pull_requests group by date_
--select comment,date::date,count(*) from pull_requests group by comment,date::d
select date_time ,MAX(number_of_times)
from (select name , date_part('week',date) date_time ,count(id) as number_of_times
     from pull_requests
     where comment='discussed'
     group by name, date_time) as deliveer
     group by date_time order by date_time;
```

Notifications

Recorded time	Event	Process ID	Payload
No data found			

	date_time double precision	max bigint
1	1	298
2	2	134



```
--select comment,date_trunc('month',date) date_time,count(*) from pull_requests grou
--select date_trunc('day',date) date_time,count(*) from pull_requests group by date_
--select comment,date::date,count(*) from pull_requests group by comment,date::d
```

	date_time double precision	max bigint
1	1	298
2	2	134
3	3	119
4	4	210
5	5	158
6	6	124
7	7	141
8	8	150
9	9	151

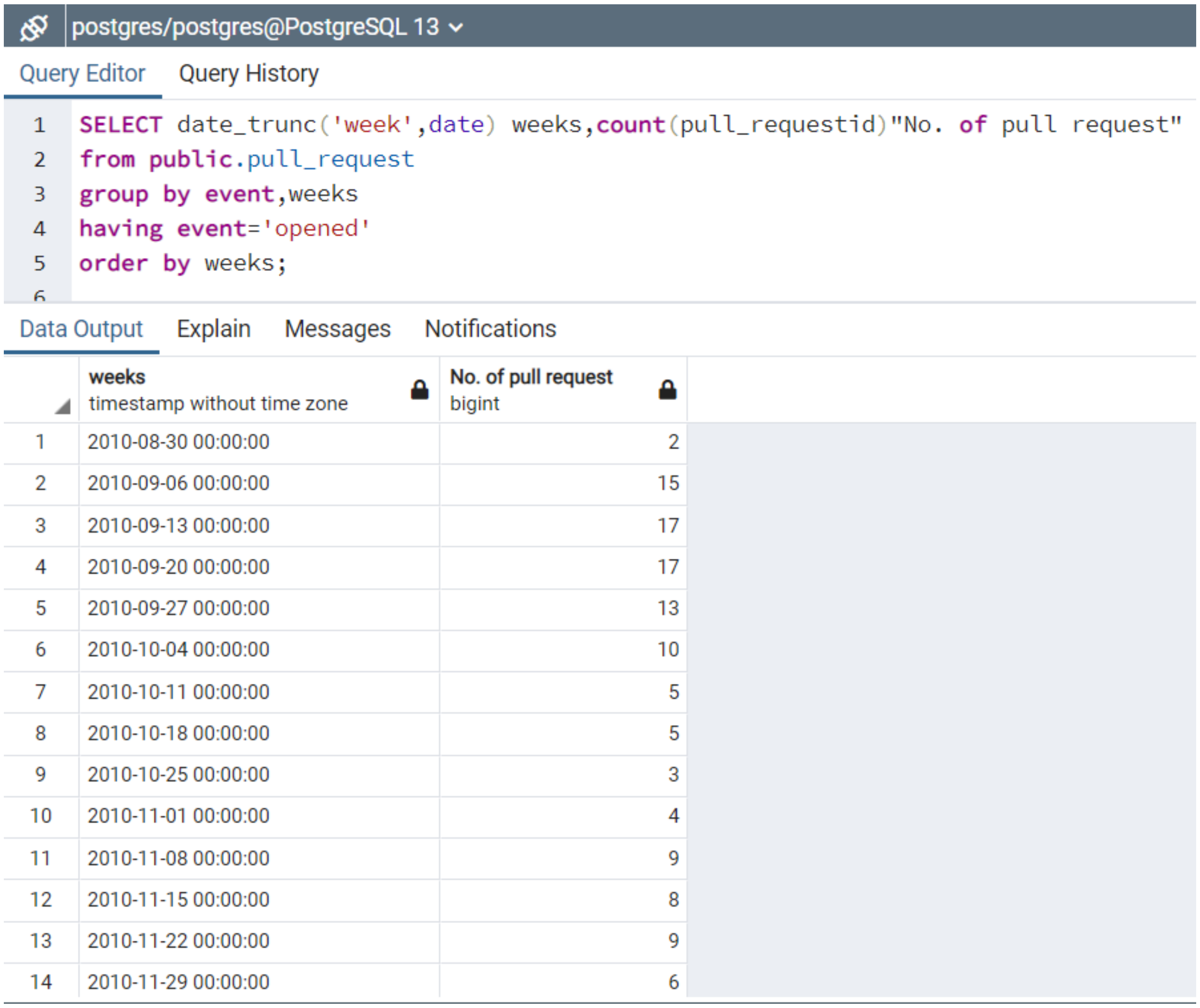
Methodology:- Here i use the nested select command to get the result. I first counted the comments in a month and then i counted the max among them.

4.

SELECT date_trunc('week',date) weeks,count(pull_requestid)"No. of pull request"
from public.pull_request

group by event,weeks
having event='opened'
order by weeks;

Output -



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Query Editor | Query History

```
SELECT date_trunc('week',date) weeks,count(pull_requestid)"No. of pull request"
from public.pull_request
group by event,weeks
having event='opened'
order by weeks;
```

Data Output | Explain | Messages | Notifications

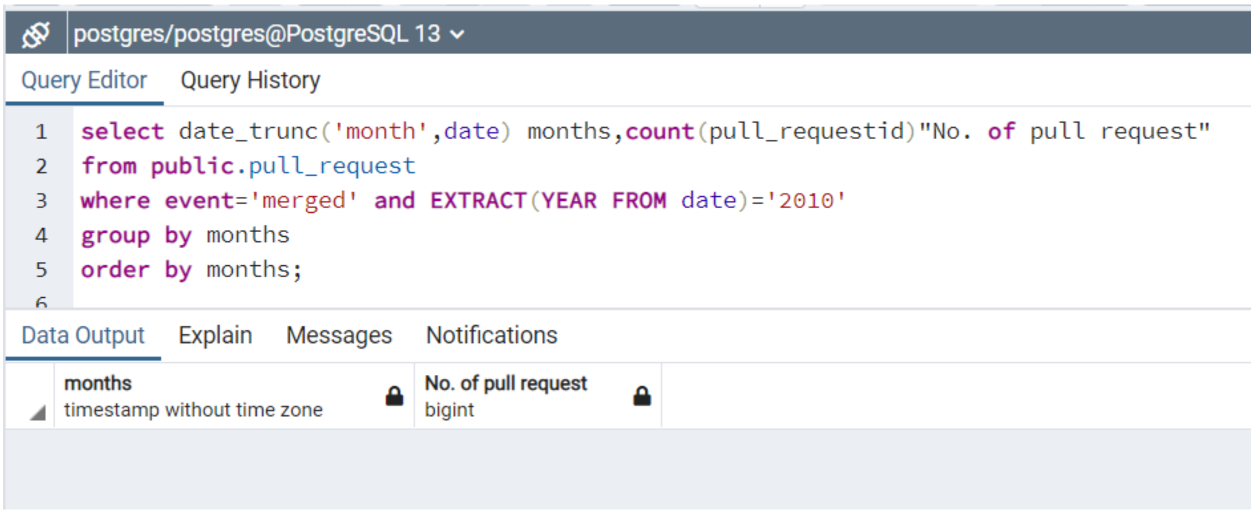
	weeks timestamp without time zone	No. of pull request bigint
1	2010-08-30 00:00:00	2
2	2010-09-06 00:00:00	15
3	2010-09-13 00:00:00	17
4	2010-09-20 00:00:00	17
5	2010-09-27 00:00:00	13
6	2010-10-04 00:00:00	10
7	2010-10-11 00:00:00	5
8	2010-10-18 00:00:00	5
9	2010-10-25 00:00:00	3
10	2010-11-01 00:00:00	4
11	2010-11-08 00:00:00	9
12	2010-11-15 00:00:00	8
13	2010-11-22 00:00:00	9
14	2010-11-29 00:00:00	6

Methodology: Here I used the date_trunc() function to convert all the dates in a week, I imported that column with the name of date and truncated it to weeks. I checked for all the comments which were opened per week and counted that.

5.

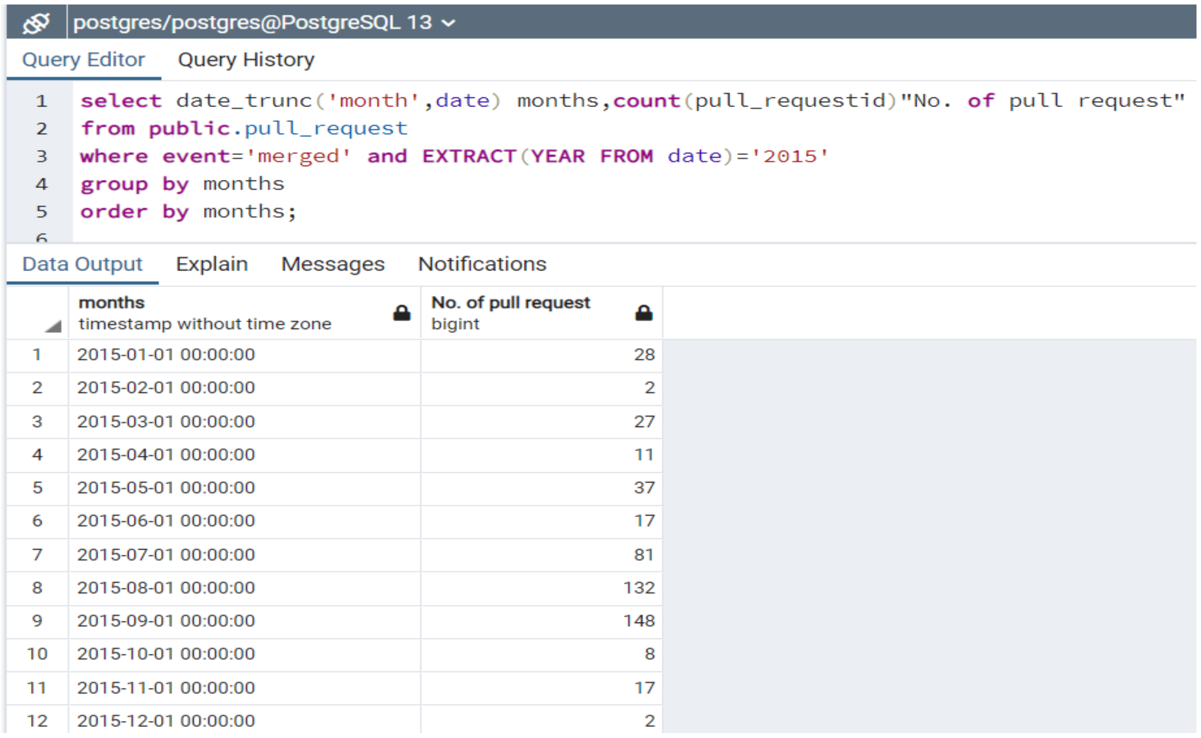
select date_trunc('month',date) months,count(pull_requestid)"No. of pull request"
from public.pull_request
where event='merged' and EXTRACT(YEAR FROM date)='2010'
group by months
order by months;

Output-



```
select date_trunc('month',date) months,count(pull_requestid)"No. of pull request"
from public.pull_request
where event='merged' and EXTRACT(YEAR FROM date)='2010'
group by months
order by months;
```

months timestamp without time zone	No. of pull request bigint



```
select date_trunc('month',date) months,count(pull_requestid)"No. of pull request"
from public.pull_request
where event='merged' and EXTRACT(YEAR FROM date)='2015'
group by months
order by months;
```

	months timestamp without time zone	No. of pull request bigint
1	2015-01-01 00:00:00	28
2	2015-02-01 00:00:00	2
3	2015-03-01 00:00:00	27
4	2015-04-01 00:00:00	11
5	2015-05-01 00:00:00	37
6	2015-06-01 00:00:00	17
7	2015-07-01 00:00:00	81
8	2015-08-01 00:00:00	132
9	2015-09-01 00:00:00	148
10	2015-10-01 00:00:00	8
11	2015-11-01 00:00:00	17
12	2015-12-01 00:00:00	2

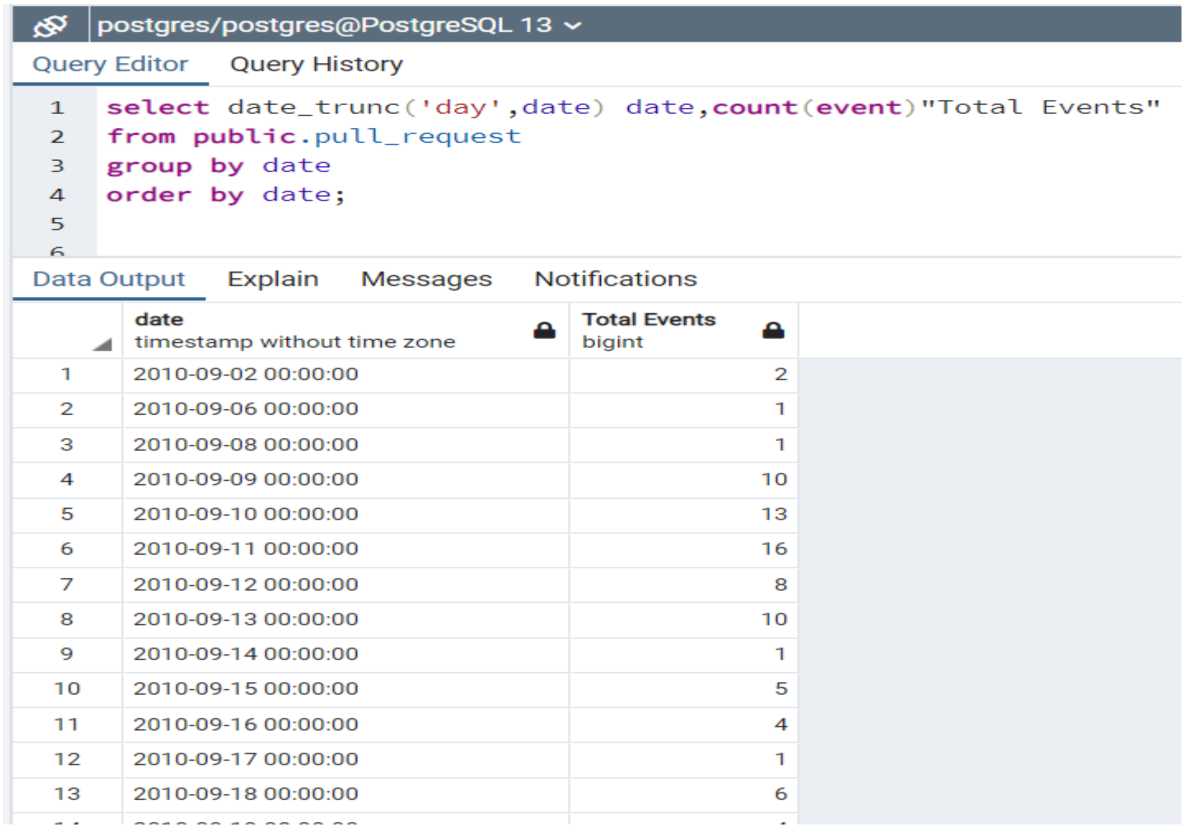
Methodology: Here I used the date_trunc() function to convert all the dates as month. I also used the extract() function to extract the year form date and then I checked for the year 2010. And for the comments that are merged.

Observation:- There were not any merged pull requests in the year 2010 so that gave me nothing in the output but when i checked for the year 2015 that time I got the above output.

6.

select date_trunc('day',date) date,count(event)"Total Events"
from public.pull_request
group by date
order by date;

Output -



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Query Editor | Query History

```
select date_trunc('day',date) date,count(event)"Total Events"
from public.pull_request
group by date
order by date;
```

Data Output | Explain | Messages | Notifications

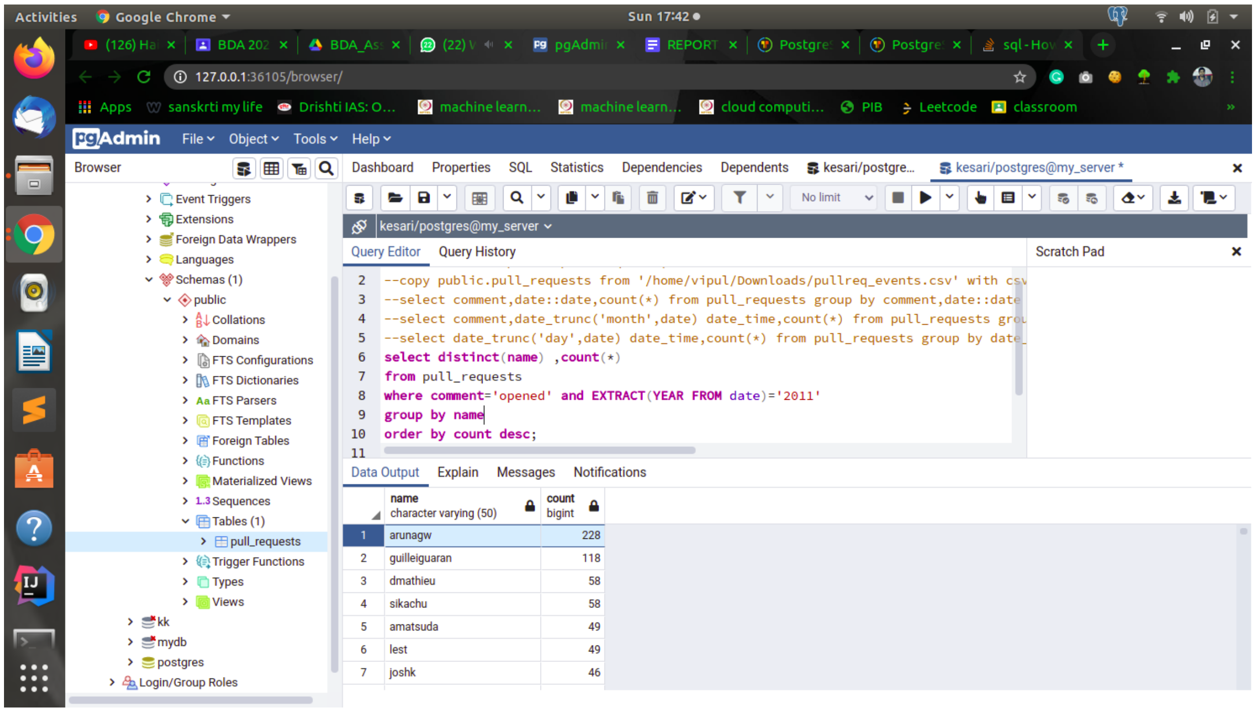
	date timestamp without time zone	Total Events bigint
1	2010-09-02 00:00:00	2
2	2010-09-06 00:00:00	1
3	2010-09-08 00:00:00	1
4	2010-09-09 00:00:00	10
5	2010-09-10 00:00:00	13
6	2010-09-11 00:00:00	16
7	2010-09-12 00:00:00	8
8	2010-09-13 00:00:00	10
9	2010-09-14 00:00:00	1
10	2010-09-15 00:00:00	5
11	2010-09-16 00:00:00	4
12	2010-09-17 00:00:00	1
13	2010-09-18 00:00:00	6

Methodology: Here I used the date_trunc() function to convert all the dates as days. And then group by dates all events are counted.

7.

select distinct(name) ,count(*)
from pull_requests
where comment='opened' and EXTRACT(YEAR FROM date)='2011'
group by name
order by count desc;

Output -



```
--copy public.pull_requests from '/home/vipul/Downloads/pullreq_events.csv' with cs
--select comment,date::date,count(*) from pull_requests group by comment,date::date
--select comment,date_trunc('month',date) date_time,count(*) from pull_requests gro
--select date_trunc('day',date) date_time,count(*) from pull_requests group by date_
select distinct(name) ,count(*)
from pull_requests
where comment='opened' and EXTRACT(YEAR FROM date)='2011'
group by name
order by count desc;
```

	name character varying (50)	count bigint
1	arunagw	228
2	guilleiguaran	118
3	dmathieu	58
4	sikachu	58
5	amatsuda	49
6	lest	49
7	joshk	46

Methodology: Here I counted all the person who had opened a pull request in the year 2011. And for getting the person with highest request i just made it in the decreasing order so i got the output as *"arunagw" 228* . Here i used extract function to extract the year from the date column.

Output -

Learning:

1. **Firstly I was able to revise my dbms course concept.**
2. **I got to know how to work with postgresql and pgadmin4.**

3. **I got to know some amazing functions named date_trunc, datepart, extract.**
4. **I got to know how to import the whole csv file into the db.**