

Operations Analytics

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Project Description and Approach

Operations Analytics is important for getting the glimpse, as how businesses understand their users by capturing different types of data.

In Operations Analytics overall functioning of a company is investigated for taking better performance decision in future. It's like an offset removal system for any company to find continuous operational efficiency.

Approach

The Operations data for performing a review work by different actors in different languages was collected. The Dataset was uploaded to MySQL Workbench, which is having columns like date, job_id, actor_id, event, language, time_spent and organisation etc. After that, as per Business requirement, the data was analysed using SQL queries, to find solution for respective problems accordingly.

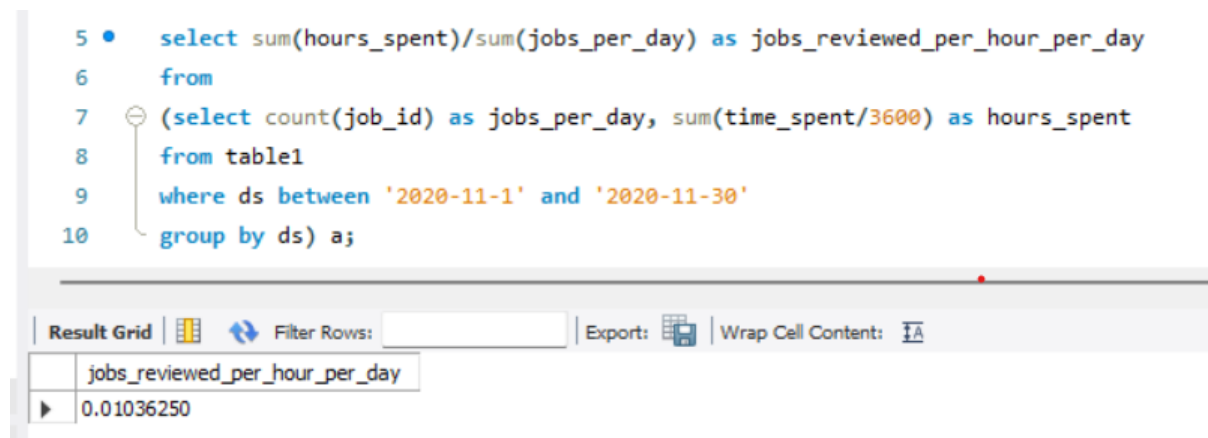
Tech-Stack Used: MySQL Workbench 8

Problem Statements

Case Study 1 (Job Data)

Q: A- Number of jobs reviewed is equal to number of jobs reviewed over time. Calculate the number of jobs reviewed per hour per day for November 2020?

```
5 • select sum(hours_spent)/sum(jobs_per_day) as jobs_reviewed_per_hour_per_day
6   from
7   (select count(job_id) as jobs_per_day, sum(time_spent/3600) as hours_spent
8    from table1
9    where ds between '2020-11-1' and '2020-11-30'
10   group by ds) a;
```



jobs_reviewed_per_hour_per_day
0.01036250

Q: B- Throughput: It is the no. of events happening per second. Calculate 7 day rolling average of throughput? For throughput, do you prefer daily metric or 7-day rolling and why?

```

15 • select ds, num_rev,
16       sum(num_rev) over (partition by ds order by ds rows between 6 preceding and current row) / sum(total_time)
17       over (partition by ds order by ds rows between 6 preceding and current row) as throughput_7day
18   from (select ds,
19         count(job_id) as num_rev,
20         sum(time_spent) as total_time
21       from table1
22       group by ds ) ab;

```

ds	num_rev	throughput_7day
2020-11-25	1	0.0222
2020-11-26	1	0.0179
2020-11-27	1	0.0096
2020-11-28	2	0.0606
2020-11-29	1	0.0500
2020-11-30	2	0.0500

Q: C- Percentage share of each language: Share of each language for different contents. Calculate the percentage share of each language in the last 30 days?

```





31 • select lang,
32       sum(count(lang)) over (partition by lang order by lang rows between unbounded preceding and unbounded following)
33       as lang_occ,
34       sum(count(lang)) over () as lang_tot,
35       (100*sum(count(lang)) over (partition by lang order by lang rows between unbounded preceding and unbounded following) / sum(count(lang))
36       over ()) as percentage
37
38   from table1
39   group by lang;
40

```

lang	lang_occ	lang_tot	percentage
Arabic	1	8	12.5000
English	1	8	12.5000
French	1	8	12.5000
Hindi	1	8	12.5000
Italian	1	8	12.5000
Persian	3	8	37.5000

Q: D- Duplicate rows: Rows that have the same value present in them?

```
61 • select *, rownum
62   from (
63       SELECT *,
64       ROW_NUMBER() OVER (partition by job_id order by job_id) AS rownum
65       FROM table1) a
66   where rownum > 1;
```

Result Grid				Filter Rows:	<input type="text"/>	Export:		Wrap Cell Content:	
	job_id	actor_id	event_sa	lang	time_spent	org	ds	rownum	rownum
▶	23	1004	skip	Persion	56	A	2020-11-26	2	2
	23	1005	transfer	Persion	22	D	2020-11-28	3	3