DBMS Term Project
Spring 22-23

Metric Evaluator

skups

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Objectives

To access and modify the database in the most efficient way possible

System-wide look @ database queries

- Which queries have taken up the most amount of time cumulatively to execute?
- Which queries are run the most frequently?
- How long on average queries take to execute?

Monitoring of sources & their statistics

- A table has how many live and dead rows?
- Is the database making efficient use of its available space?

Methodology

pg_stat_statements

PostgreSQL

pg_stat_user_tables

Django

HTML
CSS

Roadmap

Clone the repository

- $ git clone github.com/pranav610/MetricEvaluation

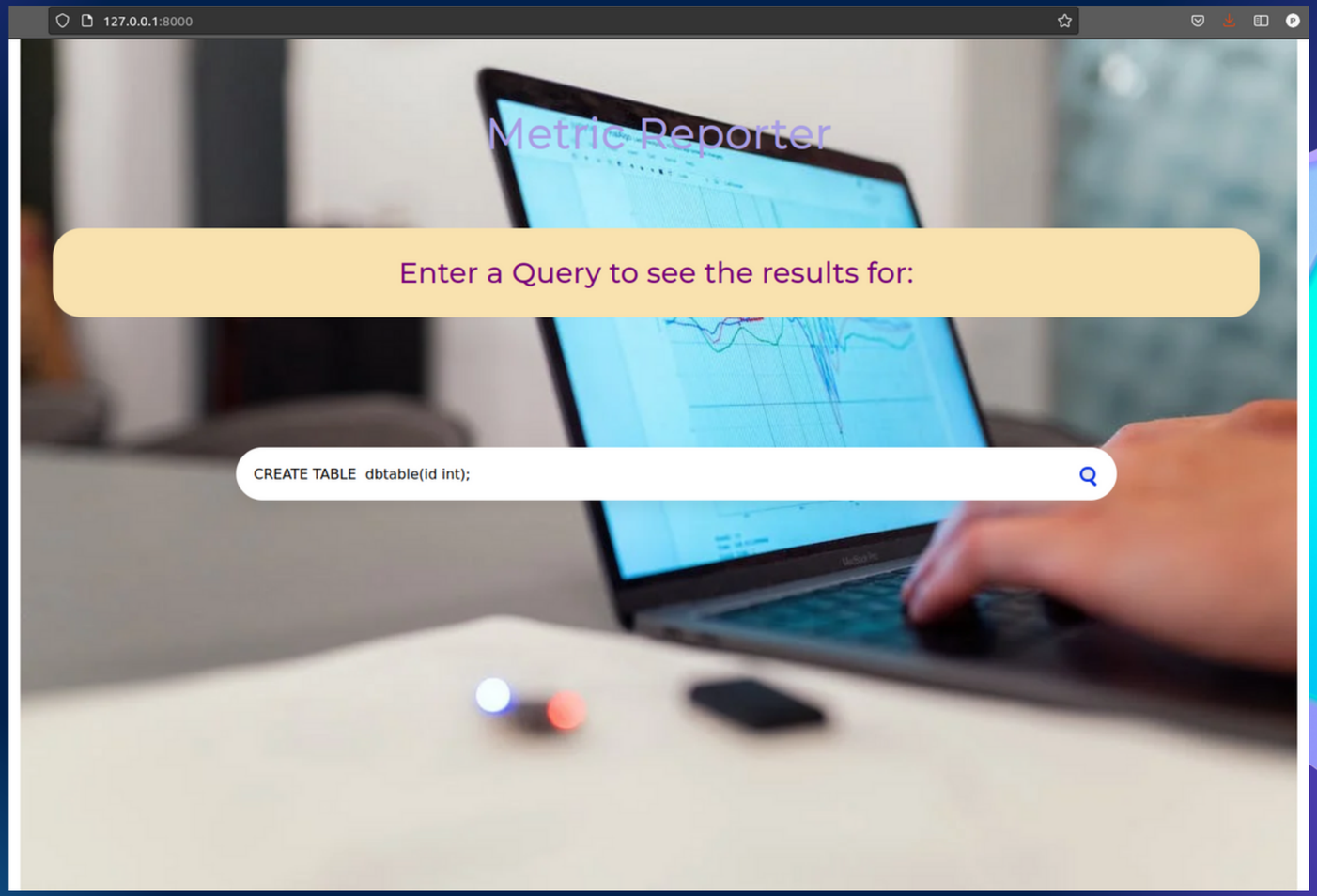
Install the dependencies

- $ pip install virtualenv
- $ python3 -m venv env
- $ source env/bin/activate
- $ pip install -r requirements.txt

Run the Django server

- $ python3 manage.py makemigrations
- $ python3 manage.py migrate
- $ python3 manage.py runserver

Firing a query to see the results



Results: Query

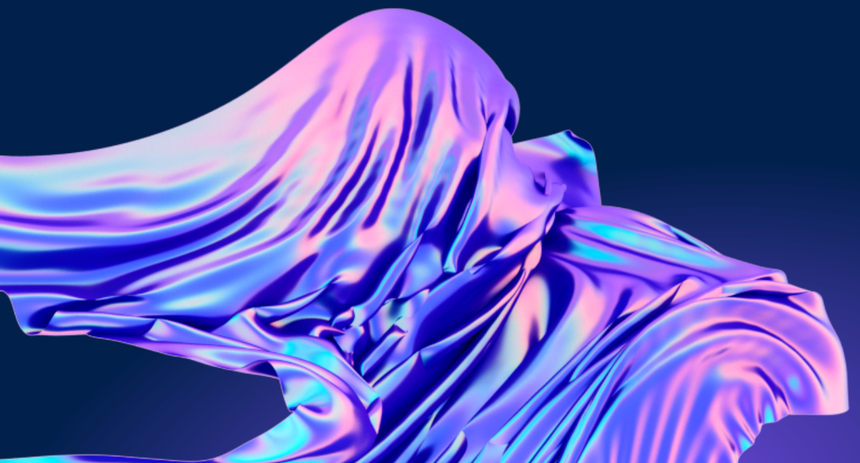
Your Input CREATE TABLE dbtable(id int)

Home

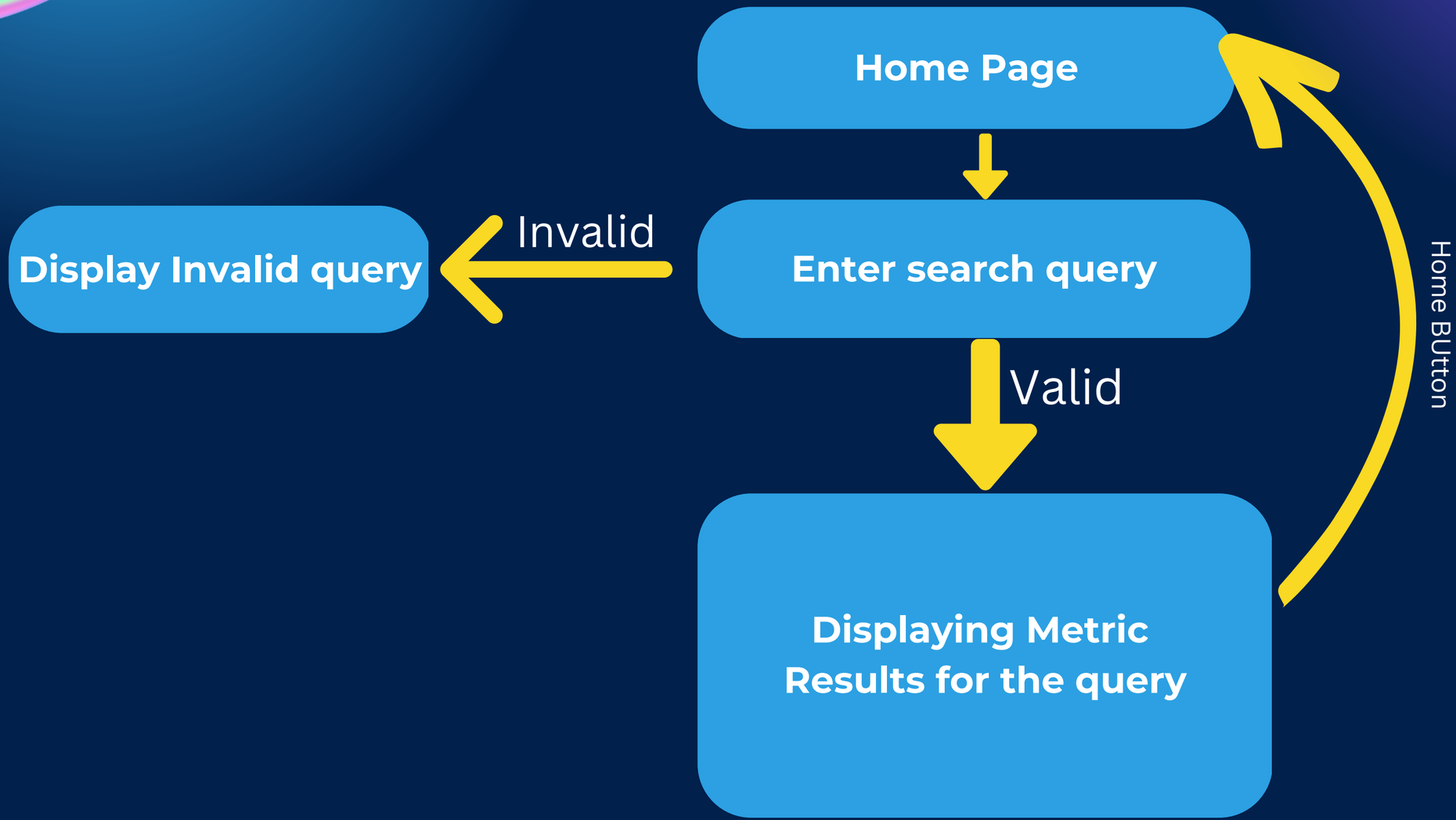
#	Metric To Be Evaluated	Evaluation Performance
1	Total time	7.876308 sec
2	Mean time	7.876308 sec
3	Rows returned	0 rows
4	Shared blocks hit	258 blocks
5	Shared blocks read	0 blocks
6	Shared blocks dirtied	5 blocks
7	Shared blocks written	1 blocks
8	Local blocks hit	0 blocks
9	Local blocks read	0 blocks
10	Local blocks dirtied	0 blocks
11	Local blocks written	0 blocks
12	Temp blocks read	0 blocks
13	Temp blocks written	0 blocks
14	Block read time	0.0 sec
15	Block write time	0.0 sec

Results: Tables

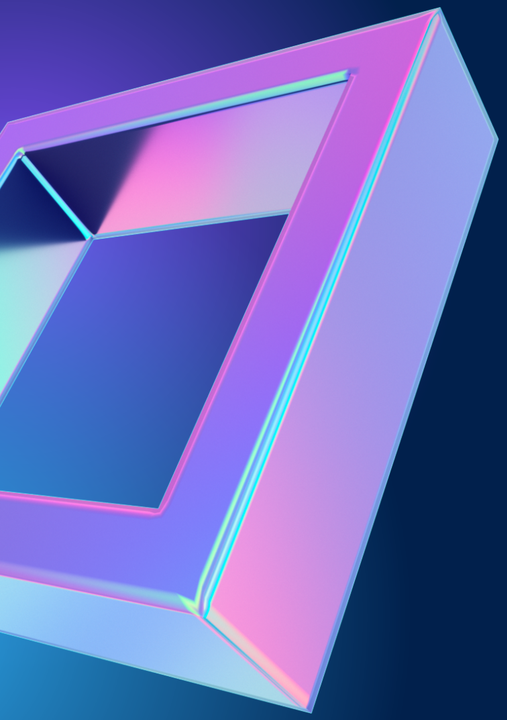
#	Relation Name	Live/Dead Tuples
1	physician	10, 0
2	Medicine	5, 4
3	Rooms	10, 0
4	Tests	5, 25
5	Appoitments	5, 50



WorkFlow


Home Page
Enter search query
Invalid
Display Invalid query
Valid
Displaying Metric Results for the query
Home BUtton

Measure. Improve. Repeat.
Evaluate and optimize for success.



Thank You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Most frequently dispensed #PostgreSQL tip-of-the-day here in the Postgres devroom at #FOSDEM? Use pg_stat_statements! @Xof's talk on Breaking PostgreSQL at Scale is the 4th talk today to drive this point home HT @craig @net_snow @magnushagander
4th PostgreSQL talk today that highlights usefulness of pg_stat_statements
7:01 PM · Feb 3, 2019