Backend dan frontend IOT dashboard

Nodered sqlite backend dengan graphana

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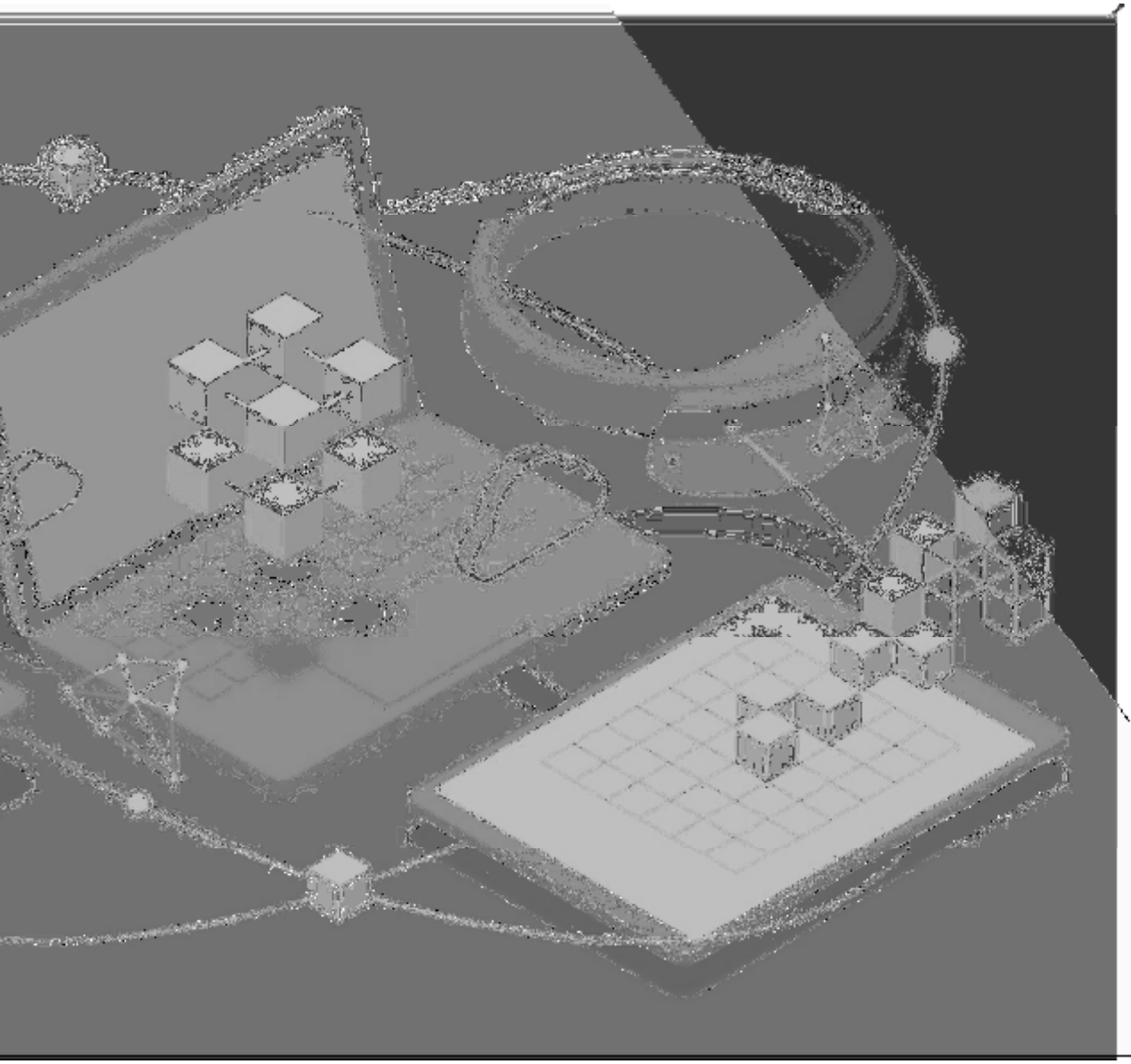
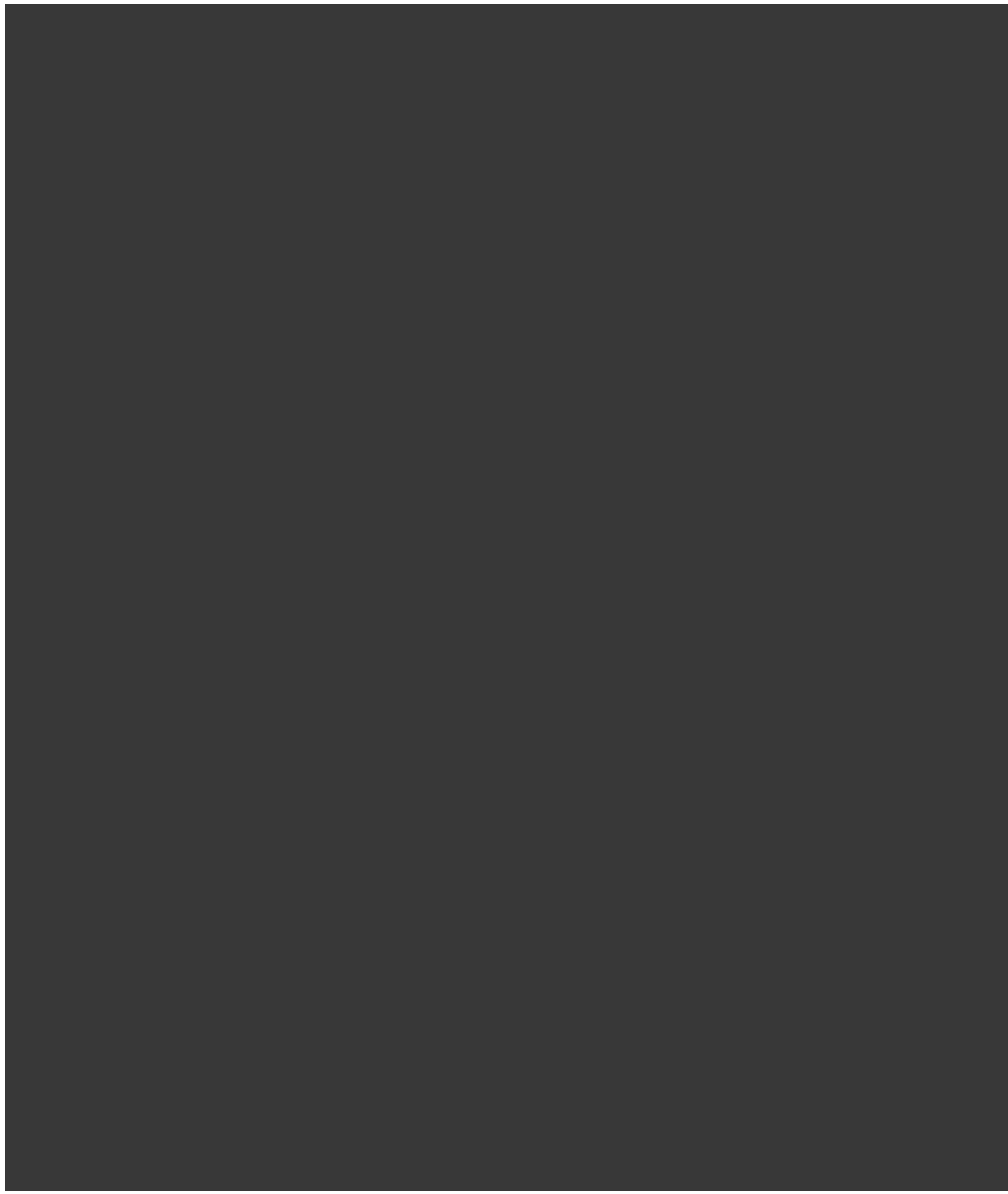


01

Pengenalan

GOAL

- Memahami sistem front end, back end, and full-stack development.
- Menggunakan database sqlite dan influxdb
- Menggunakan fungsi pada node-red
- Menampilkan data time line pada dashboard grafana



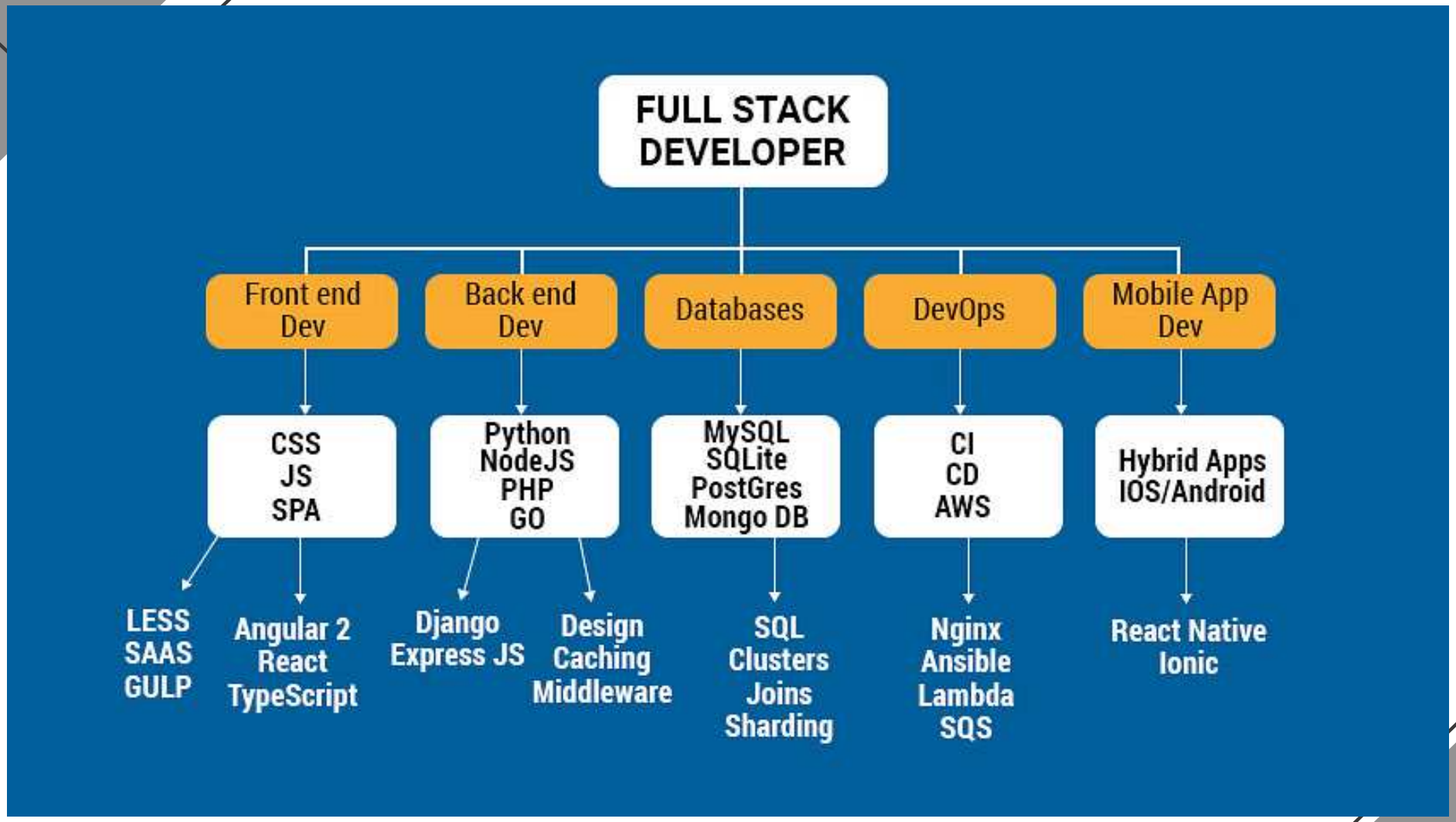
FRONT END, BACK END, AND FULL-STACK DEVELOPMENT.

FRONT END

1.Memastikan kelayakan teknis desain dari UI/UX
2.Mengoptimalkan kecepatan dari *website*/aplikasi
3.Menerapkan elemen visual situs web atau aplikasi
4.Menggunakan desain responsif dalam pembuatan antarmuka pengguna situs web atau aplikasi
5.Menguji situs web atau aplikasi untuk kegunaan
6.Memecahkan masalah kode apa pun yang tidak berfungsi
7.Meningkatkan arsitektur visual situs web atau aplikasi
8.Memastikan bahwa semua kelayakan dari tampilan *website* sebelum mengirimkannya ke tim back end
9.Berkolaborasi tim lainnya

BACK END

1.Mengelola dan mengembangkan sumber daya API (Application Programming Interface) yang berfungsi di seluruh perangkat
2.Membuat sistem pemrosesan pembayaran yang menyimpan data yang diperlukan dengan aman
3.Selalu perbarui aplikasi web, aman, dan cepat
4.Memantau status server
5.Menerapkan algoritma dan memecahkan masalah yang terkait dengan sistem server atau data base
6.Mengembangkan CMS (Content Management System);
7.Mendukung pengembangan frontend dengan komunikasi yang jelas dan dokumentasi yang baik
8.Menyimpan dan mengelola data secara efektif

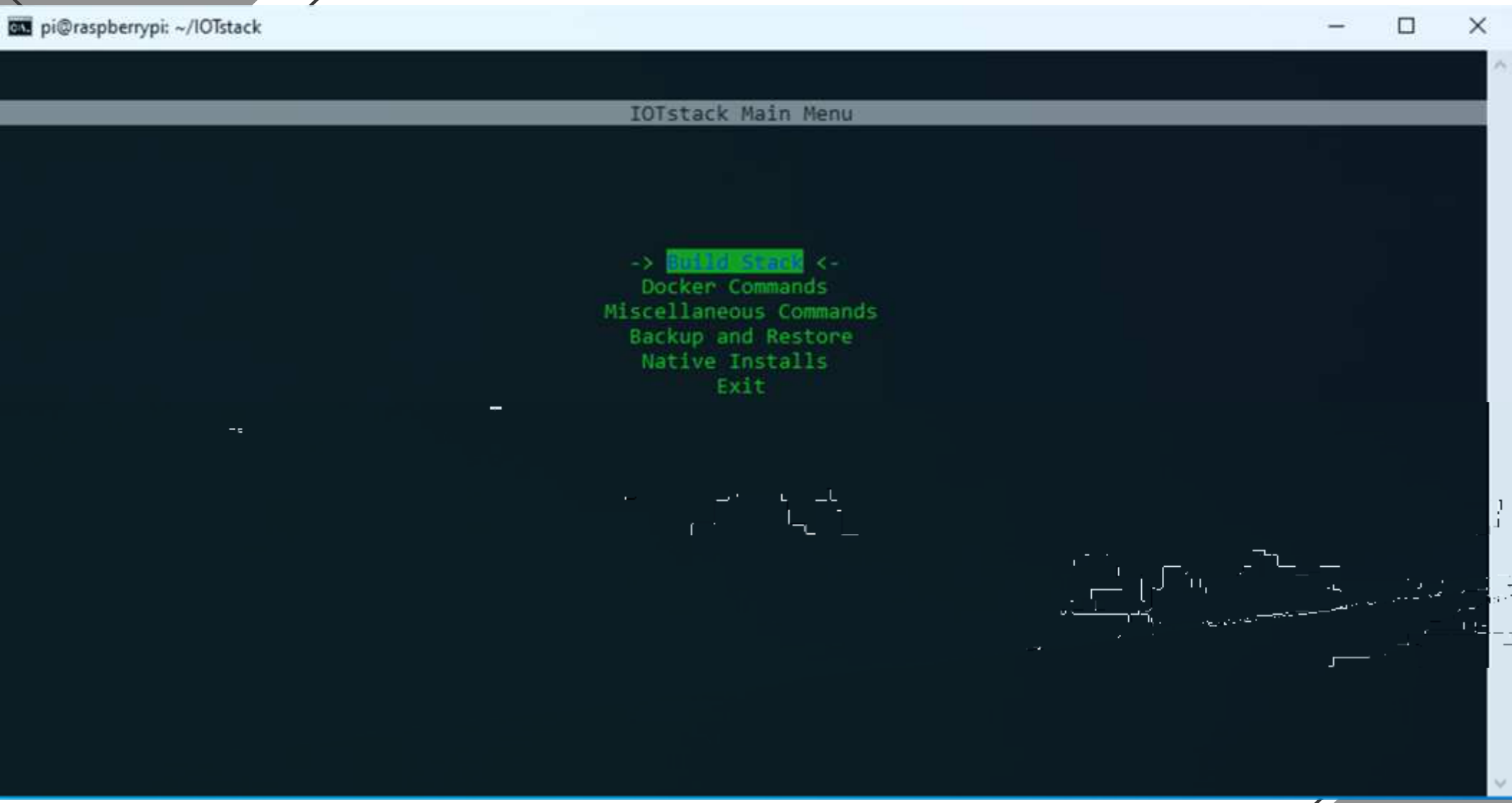

FULL STACK DEVELOPER
Front end Dev
Back end Dev
Databases
DevOps
Mobile App Dev
CSS
JS
SPA
Python
NodeJS
PHP
GO
MySQL
SQLite
PostGres
Mongo DB
CI
CD
AWS
Hybrid Apps
IOS/Android
LESS
SAAS
GULP
Angular 2
React
TypeScript
Django
Express JS
Design
Caching
Middleware
SQL
Clusters
Joins
Sharding
Nginx
Ansible
Lambda
SQS
React Native
Ionic

INFLUXDB

Node-red untuk query for influxdb

InfluxDB

InfluxDB is an open-source high-performance time series database (TSDB) that can store large amounts of data per second. Each data point you submit to the database is associated with a particular timestamp. So, it is ideal for IoT datalogging projects like storing data from your weather station sensors.


pi@raspberrypi: ~/IOTstack
IOTstack Main Menu
-> Build Stack <-
Docker Commands
Miscellaneous Commands
Backup and Restore
Native Installs
Exit

Service to install

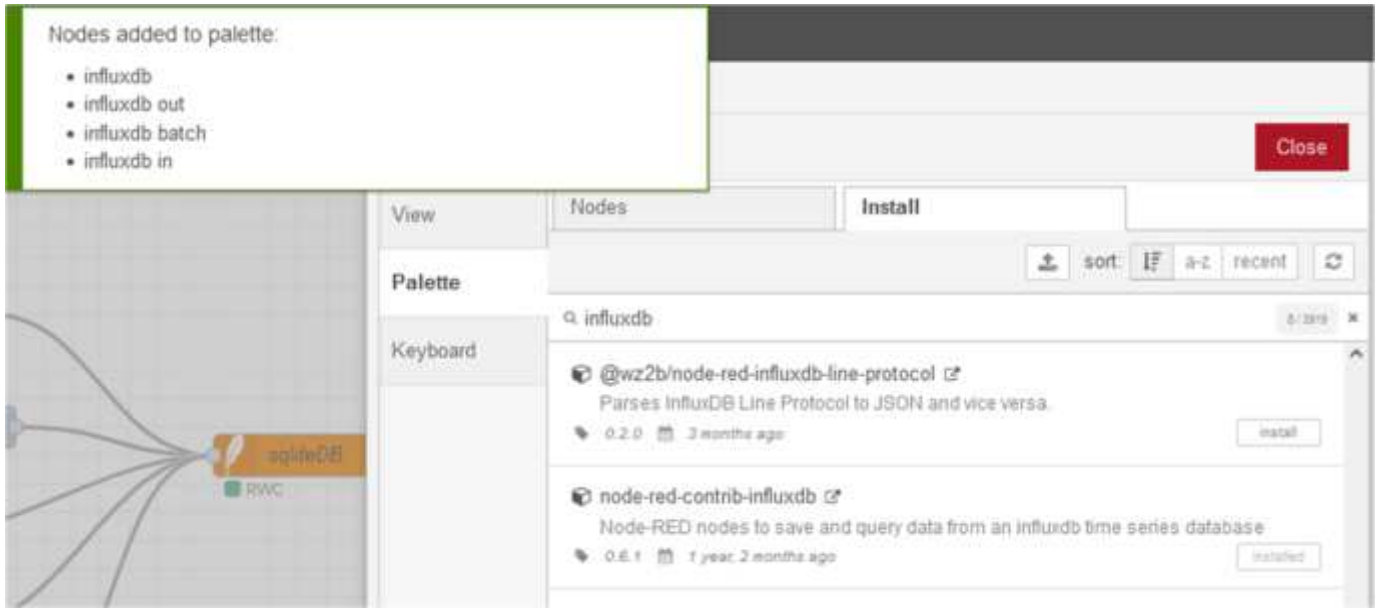
- Nodered
- Portainer-ce
- Mosquito
- Influxdb
- Grafana

Install windows influxdb (service)

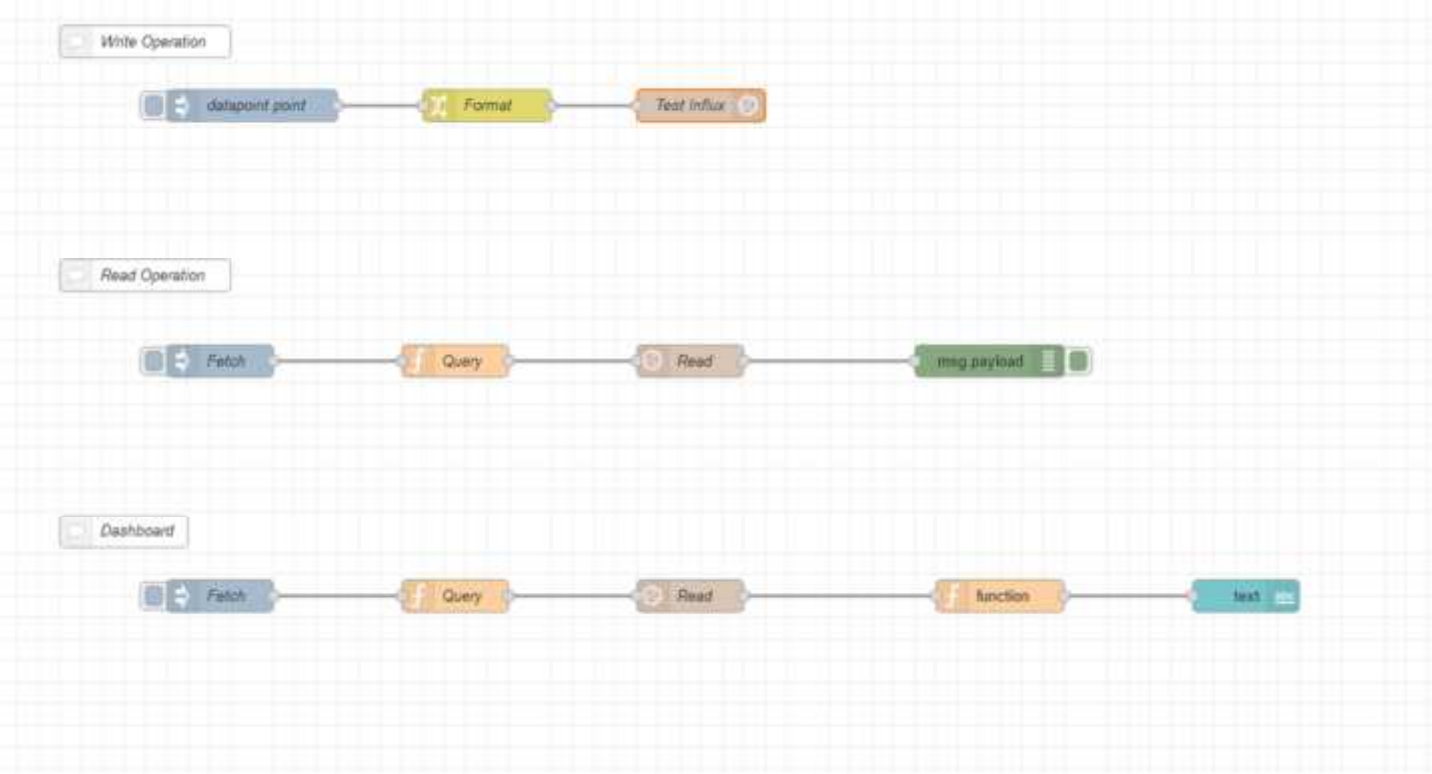
- https://portal.influxdata.com/downloads/
- wget https://dl.influxdata.com/influxdb/releases/influxdb-1.8.10_windows_amd64.zip -UseBasicParsing -OutFile influxdb-1.8.10_windows_amd64.zip
- Expand-Archive .\influxdb-1.8.10_windows_amd64.zip -DestinationPath 'C:\Program Files\InfluxData\influxdb\'

INSTALL INFLUXDB

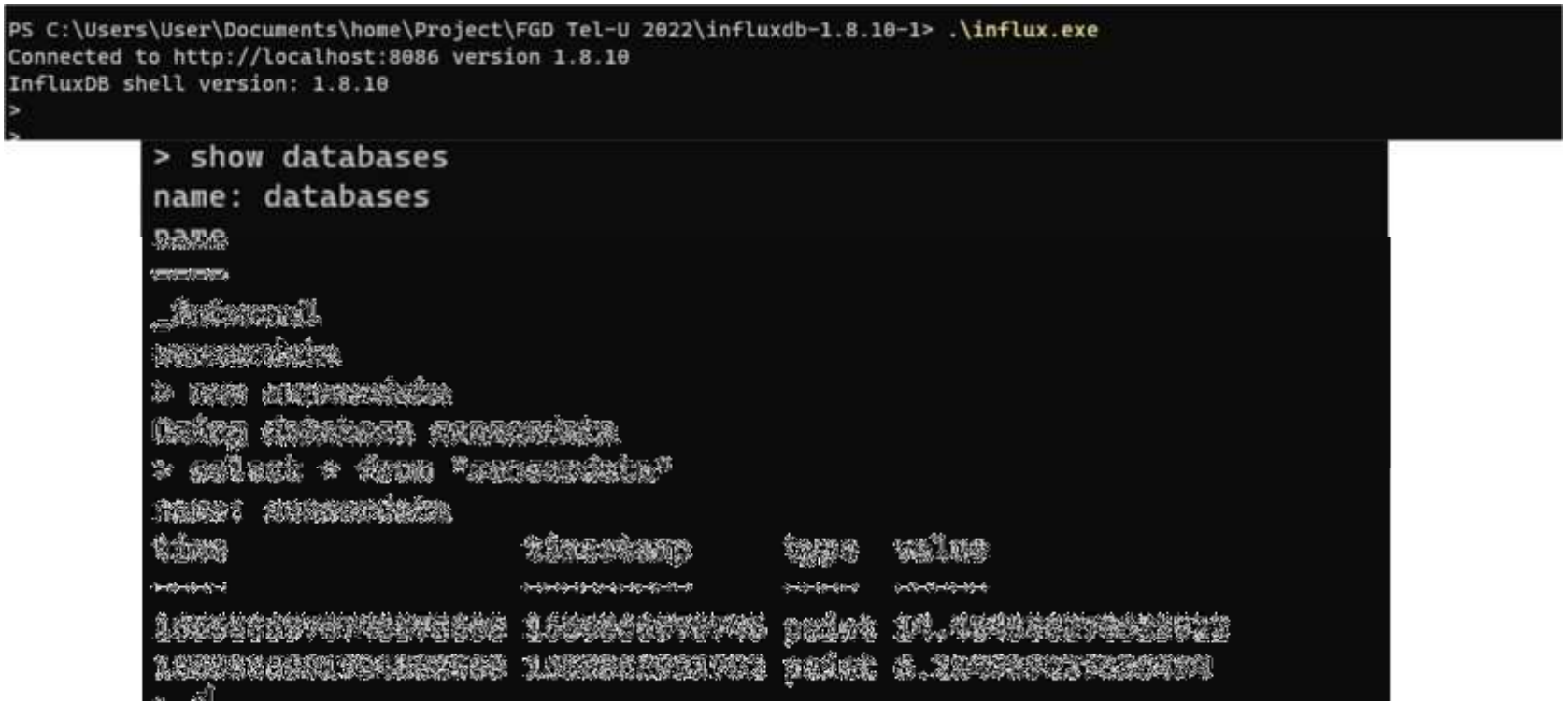
Install node-red-contrib-influxdb from install pallette

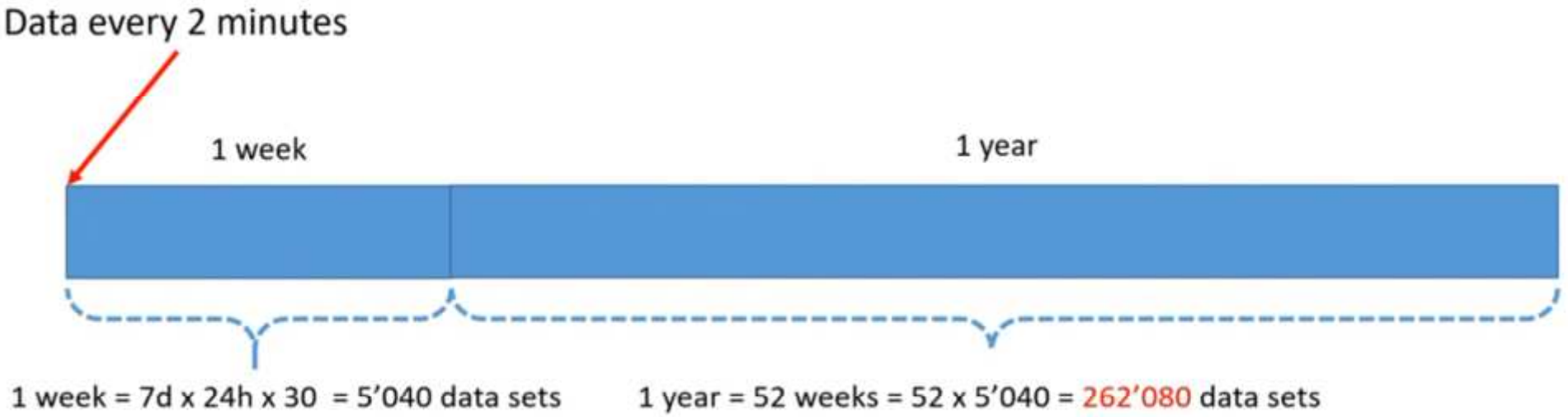


INFLUXDB NODE RED TUTORIAL



SQL QUERY

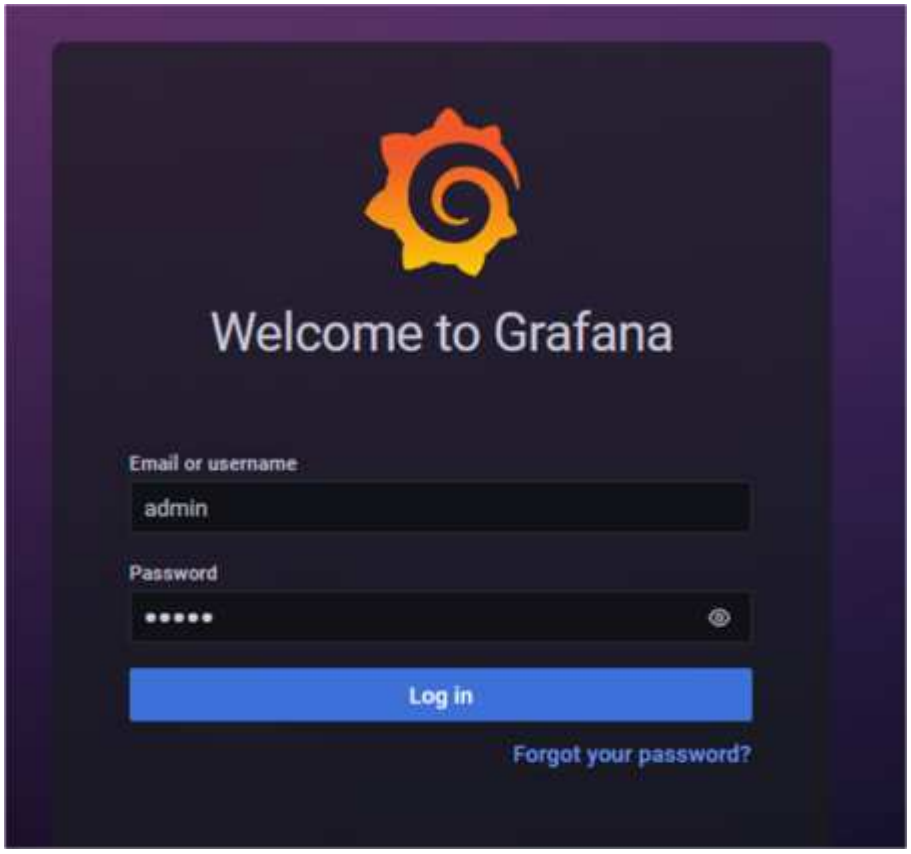

PS C:\Users\User\Documents\home\Project\FGD Tel-U 2022\influxdb-1.8.10-1> .\influx.exe
Connected to http://localhost:8086 version 1.8.10
InfluxDB shell version: 1.8.10
> show databases
name: databases


Data every 2 minutes
1 week
1 year
1 week = 7d x 24h x 30 = 5'040 data sets
1 year = 52 weeks = 52 x 5'040 = 262'080 data sets

GRAFANA

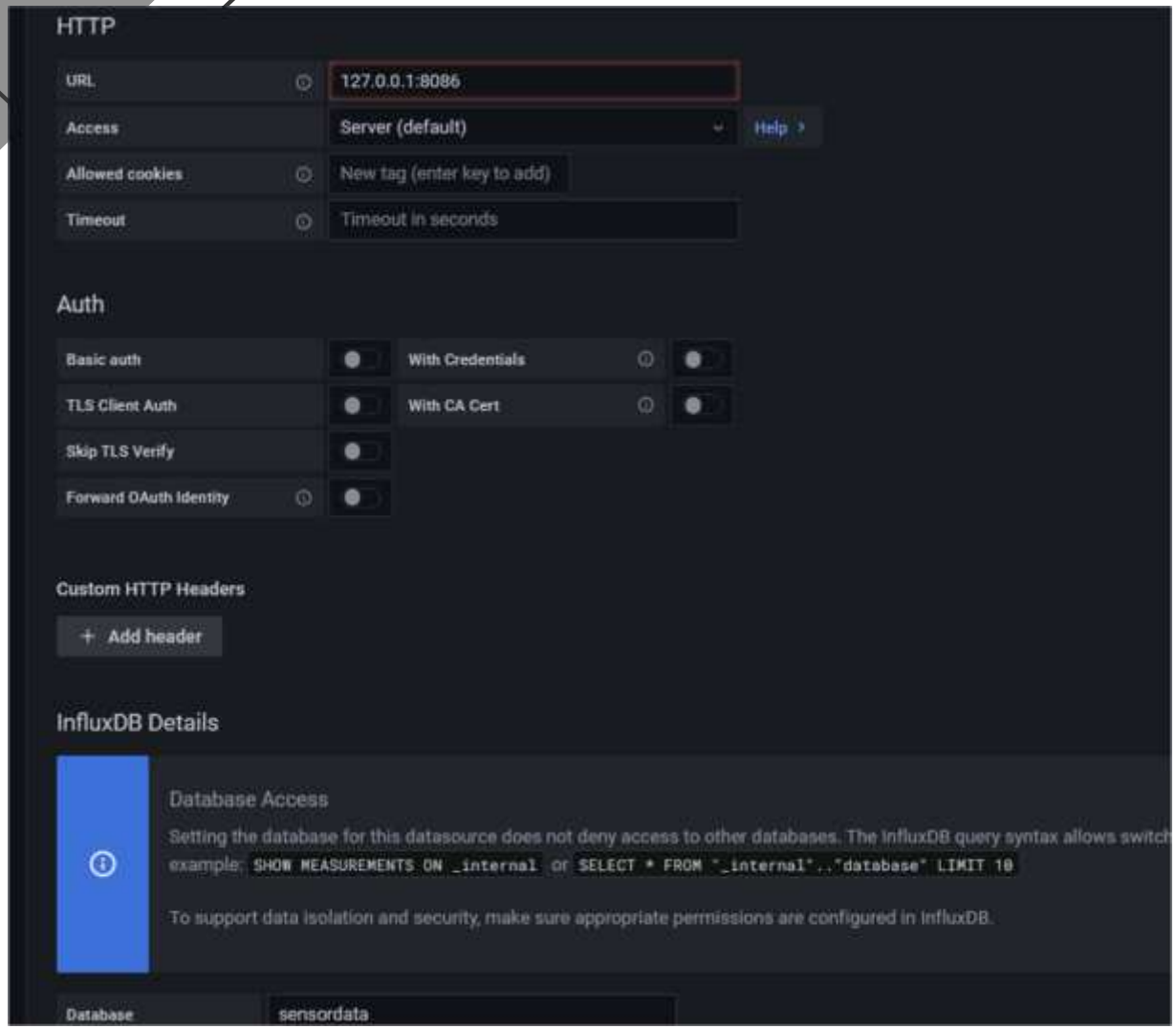
Dashboard

Open http://localhost:3000



Username : admin
Password : admin
Configure datasource

Database connection



Dashboard


General / IoT Dashboard
Panelsensor1
35
30
25
20
15
10:13:00
10:13:30
10:14:00
10:14:30
10:15:00
10:15:30
10:16:00
10:16:30
sensordata.mean

THANKS

Do you have any question?

hasbiida@gmail.com