

IoT, Flutter, ReactJS, Thymeleaf, Spring Boot, Spring Cloud, Big Data(Hadoop)

IoT Smart Factory

Background Research:

- 1- Spring API gateway & microservice, service registry, log file and visualization by ELK, Grafana
- 2- IoT with HTTP protocol
- 3- MCU (Arduino UNO, ESP32), SOC (ESP01), MPU Raspberry PI 4
- 4- Apache Hadoop (Big Data, Distributed Computing)

Objective:

- Implement IoT, Mobile, Web, Microservice, Log file, Graph visualization, MVC framework, Big Data, Simple 3D Modelling and PCB design
- Automation solution for IoT Smart Factory

Technology:

- Spring Boot, Spring Cloud, Thymeleaf, Spring Security, Eureka, ELK, Grafana, Docker, Microsoft Azure
- Junit, Apache Hadoop, Distributed Computing, Virtualization
- IoT and AIoT, IIoT

Conclusion

- Accomplish a great distributed filesystem fundamental for big data, IoT, AIoT, IIoT, Microservice backend and MVC Storage as a service web application, simple 3D modelling and PCB design



Ho Weng Yin

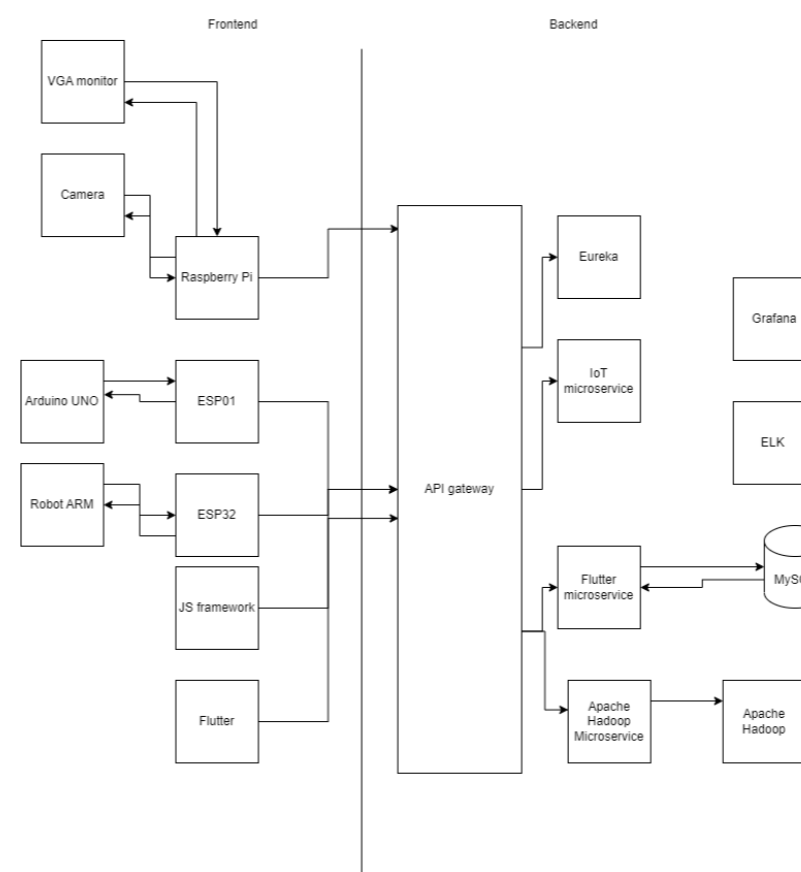


Edmond Coh Rui En

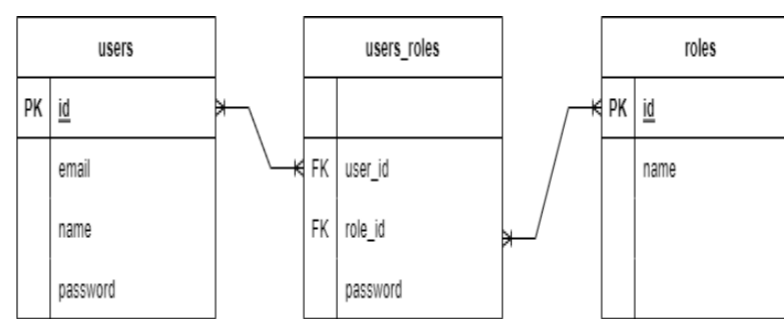


Ashrveen Kumar

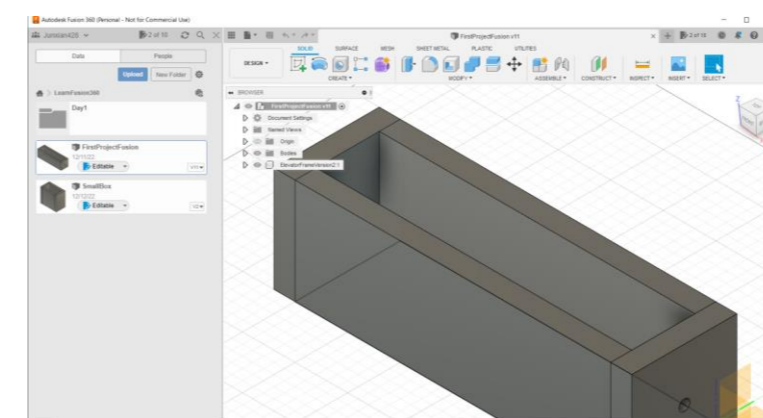
System Design:



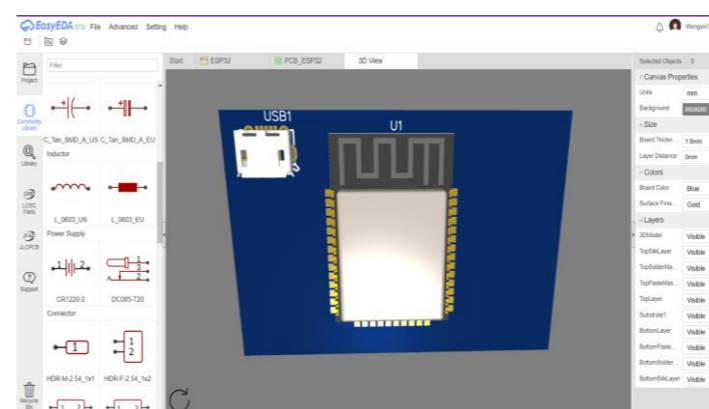
STaaS ERD diagram



Circuit Diagram

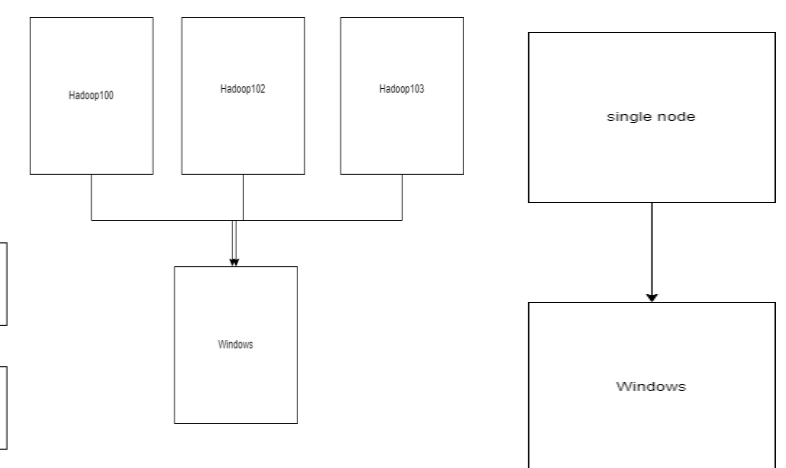


3D Modelling



PCB Design

Apache Hadoop Cluster (3 nodes) and Single Node



User Case Diagram

