Modbus gateway

Team Presentation

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- Backend on ESP32
  - Web Server

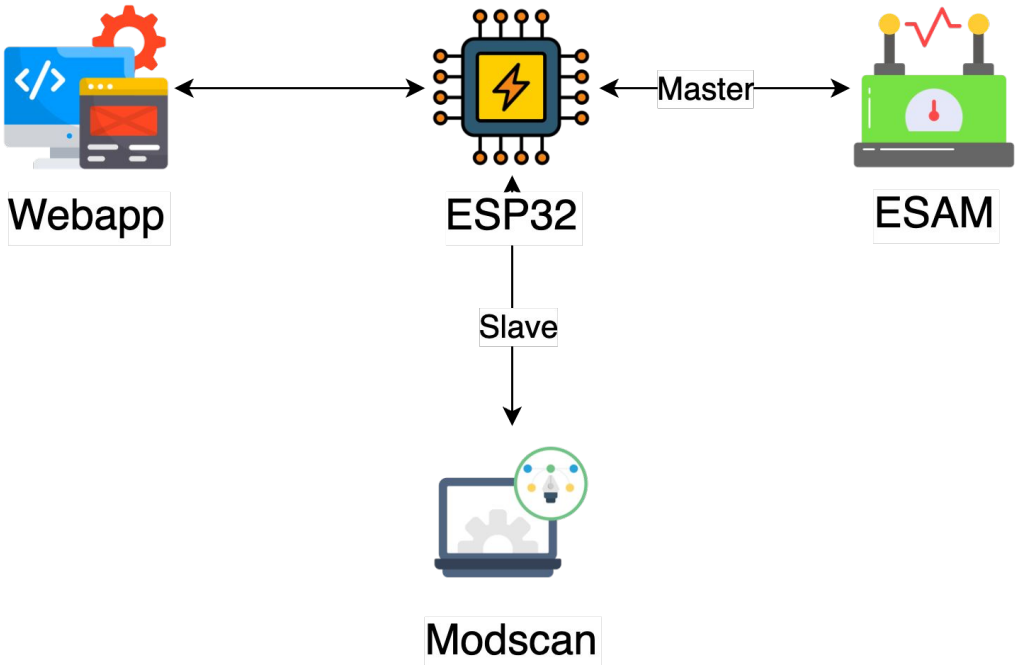
Introduction 2/2

- Wi-Fi setup
  - Captive portal
- Web interface
  - Configuration page
  - Analytics page

Modbus protocol

- Industrial communication standard
- RTU/TCP mode
- Master/Slave paradigm

Development environment



Implementation - ESP32

- Modbus gateway
  - Master/Slave
  - Libraries
  - Manage registries

- Backend

Implementation - ESP32

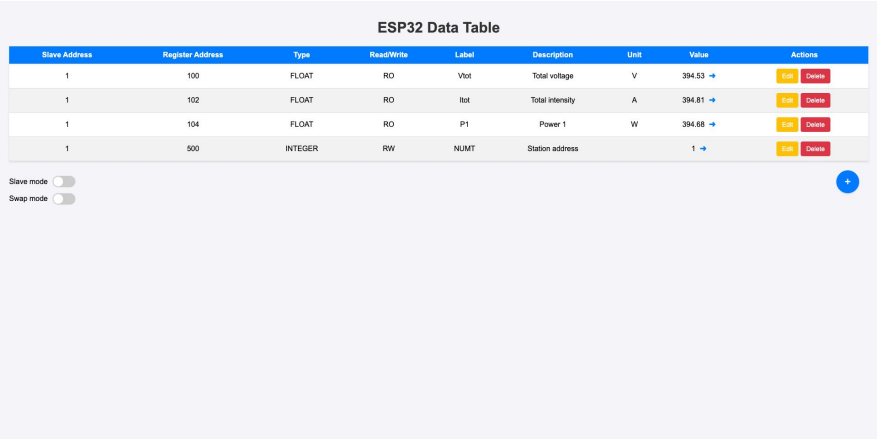
- Web Server
- Endpoints
  - CRUD operations
  - Modbus settings
  - Hosted pages

Implementation

- Wi-Fi
  - DNS Server
  - Captive-portal
  - AJAX technique
  - Connection status control

Implementation

- Web app
  - Hosted on ESP32
  - Lighter client
  - HTML, CSS, JS
  - External library



Results

- Modbus gateway
- Wi-Fi setup flow
- User-friendly interface


DEMO

Future developments

- External storage data
- Web application hosting
- Improved scalability

Thanks!

Any questions ?

You can find us at

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Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Photographs by Unsplash