Critical Systems Lab - MESCC
Water Pumping Automated System

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1 Introduction

2 Requirement Specifications

- ligar uma bomba de modo aleatorio de modo a nao corruer apenas uma. - lista do que foi implementado

2.1 System Requirements

2.2 System Structure and Traceability

3 Implementation

3.1 CCSYA - Assembly

- mostrar codigo da implementacao - um dos comentarios no codigo de assembly está mal (beq)

3.2 RTAES - Concorrency and Real Time Scheduling

- mostrar codigo da implementacao - onde mutex

3.3 COMCS - Communication

- TCP pull strategy
    - Arthur

3.4 Prototype

3.4.1 Overview

- diagram if implementation

3.4.2 WPS

- explicar a tabela dos inputs dos sensores e levantar alarm caso (A tabela agora é diferente da ultima vez) - strategy for cluster of control unit nodes

3.4.3 MQTT Broker

- one topic per WPS

3.4.4 RSS

- reads broker every 1 sec - sends alert after 10 sec without message - subscribes to each WPS topics (iter) - log who clicked the button and maintain LED on... because the system heals it self

3.4.5 Web Server

4 Team Work

References

[1] Espressif documentation: `https://docs.espressif.com/projects/esp-idf/en/latest/esp32/api-reference/system/freertos_idf.html#id23/`