uOttawa

CEG4912

Software Requirements

Submitted by: Groupe n°2

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1. Prepare a list of requirements specific to your project with at least:

a. 10 Functional Requirements

- **Mail Detection:** System must be able to detect mail with IR Sensor.
- **Image Capture:** Camera must activate due to sensor, capturing a clear image of the letter.
- **OCR Processing:** System must be able to read and interpret apartment details on letter.
- **Mail Sorting:** System must be able to orient dispenser path to correct mailbox.
- **Motor Control:** System must be able to manipulate motors as desired.
- **Mail Dispense Mechanism:** System must be able to drop mail onto dispenser path.
- **Notification Alert:** System must be able to send a notification to the respective recipient.
- **Admin Troubleshooting:** System must be able to identify when a label is unreadable.
- **MailBox Rejection:** When the letter address is unreadable, the system must reject the inserted item.
- **System Status:** System needs to provide updates on status in case troubleshooting is needed due to power outage or physical damage.

b. 5 Non-Functional Requirements

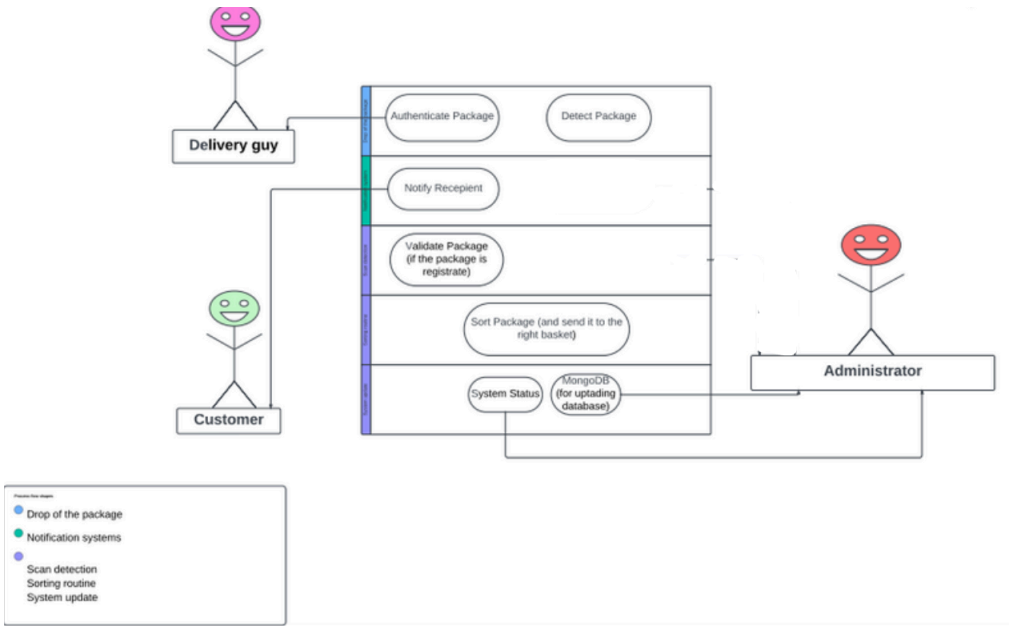
- **Reliability:** System must be able to sort mail with 98% accuracy.
- **Usability:** The procedure to dispense letters in the mailbox that is to be followed by users should be straightforward
- **Performance:** The system should be able to complete a mail sort cycle in under 30 seconds.
- **Scalability:** The system must be able to handle increased mail volume during busier times of the year.
- **Security:** All transmissions must be encrypted for the user's security, and personal information must also be secure.

More functioning and non-functioning requirements will be added as the project goes on.

c. Constraints

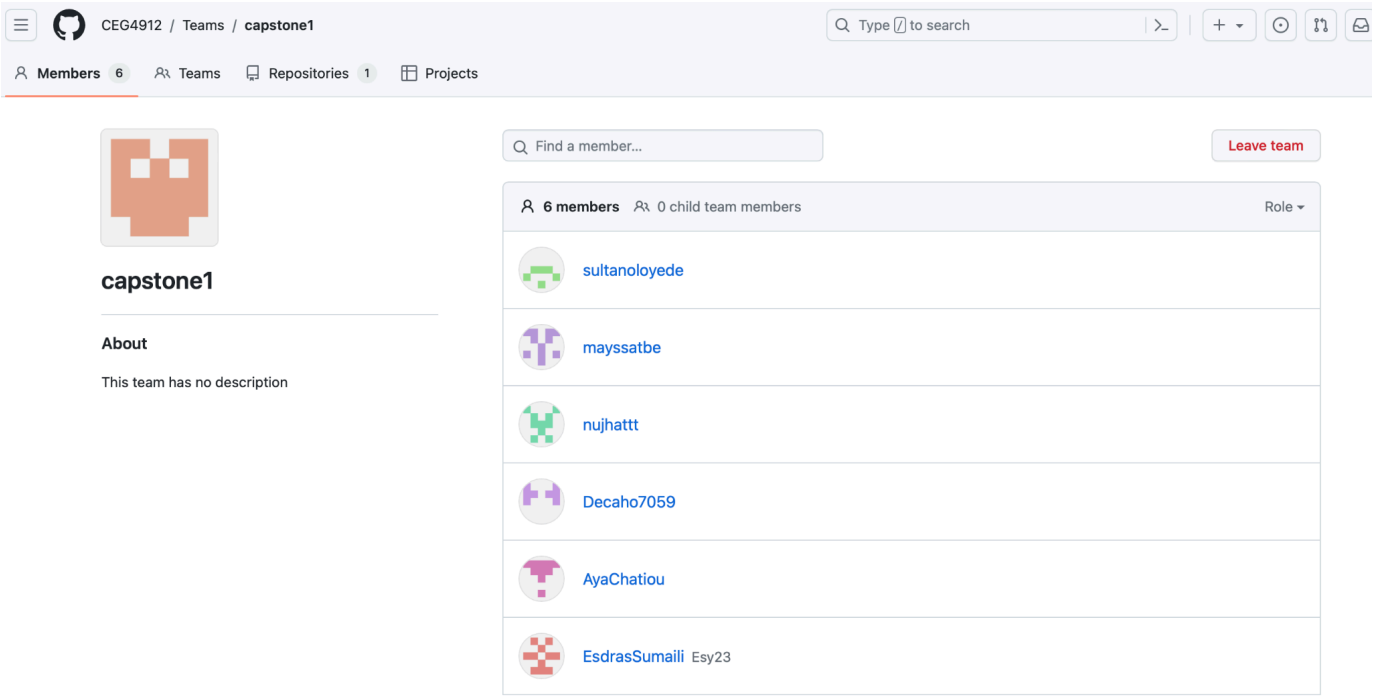
Space Limitation: System must fit within a convenient physical space while optimizing for mail holding capacity.
Budget: Equipment and materials must be cost-effective for the project.
Power Supply: System must be able to operate with the provided reasonable electrical infrastructure.
Storage: System must be configured within the 64GB microSD storage limit.

2. General Use Case:



3. Setup your Github repository and add all team members

We have established a 'CAPSTONE' team on GitHub and successfully added all team members. Additionally, we have created a dedicated repository for our project smart-mailbox-sorter to facilitate efficient collaboration and code management
Certainly, here's the revised sentence:
If you require access to our GitHub repository, please let us know, and we will add you to the group for streamlined collaboration.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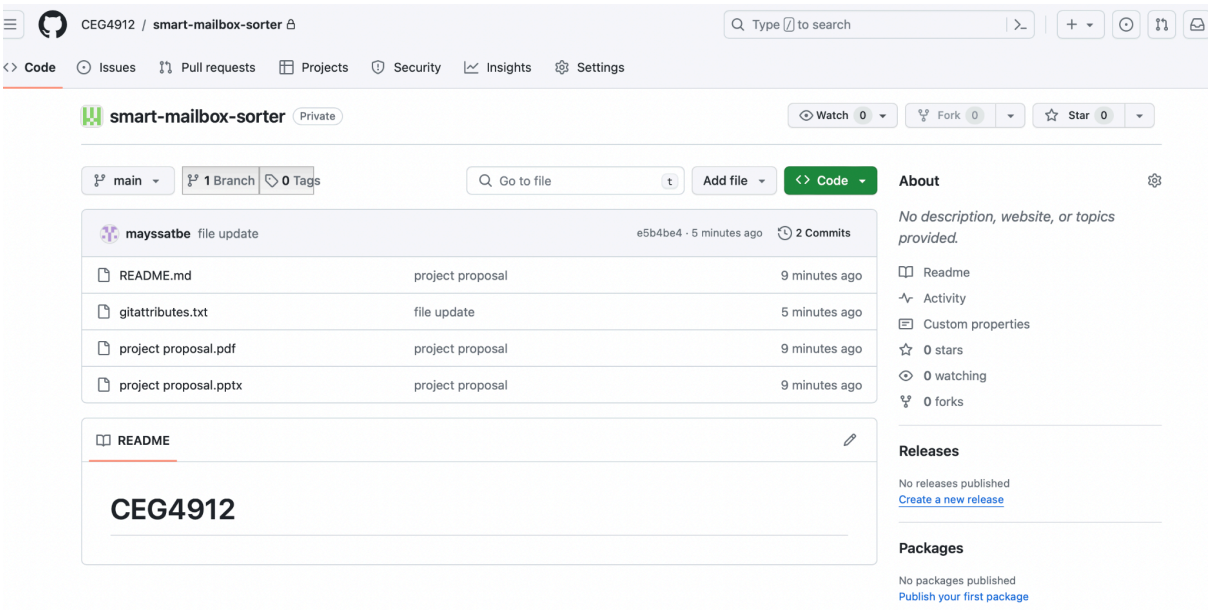
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About
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