


Smart Locker

SSYS 18-19

<https://smartlocker.gitbook.io/>

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Taakverdeling

Projectmanager: Jarno

Backend: Oussama

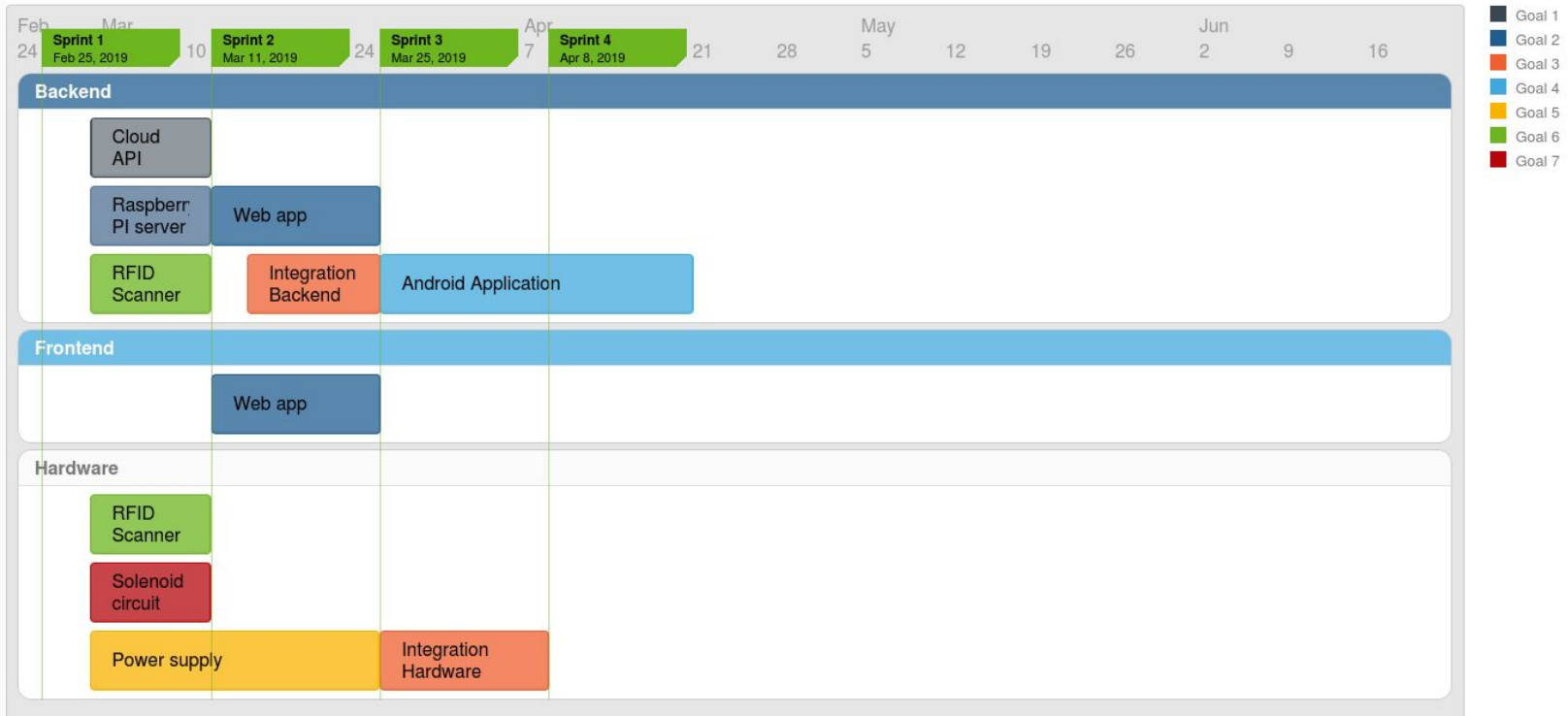
Front-end: Imad

Hardware: Afaq

Analyse

Roadmap

Product Roadmap



Jira

JP19SL-34

Solenoid Lock

6

JP19SL-24

STEP DOWN Converter Power Supply 230V to 12V

5

JP19SL-14

As a user I want to be able to interact with the locker (open and or give access, reserve a locker...) through a web app/ mobile app

API

9

Subtasks

JP19SL-32

Cloud node server

DONE

JP19SL-33

Server on RPI that is subscribed to the cloud node API

DONE

JP19SL-2

As a user I want to be able to open a locker with my student card

5

JP19SL-1

As a user I want to be able to choose which locker I unlock on a touchscreen

RPI touch interface

8

JP19SL-39

As a user I want to reserve a locker

Mobile App

6

JP19SL-38

Developer: BackEnd API server

10

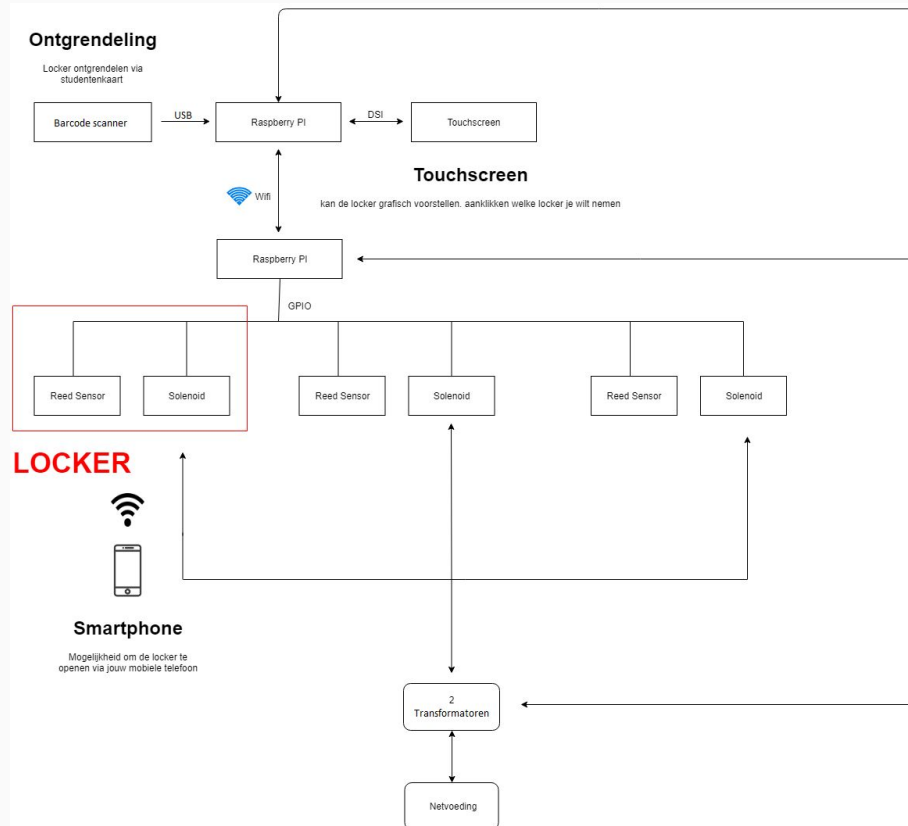
Technologieën



express



Hardware

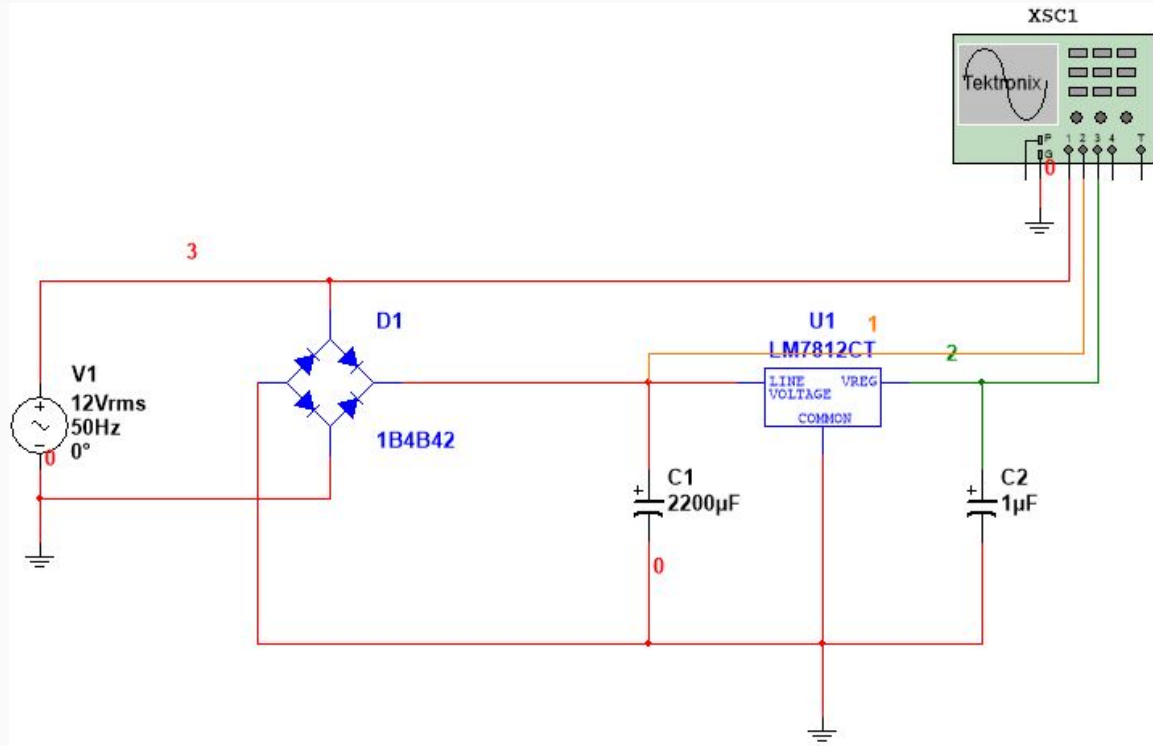
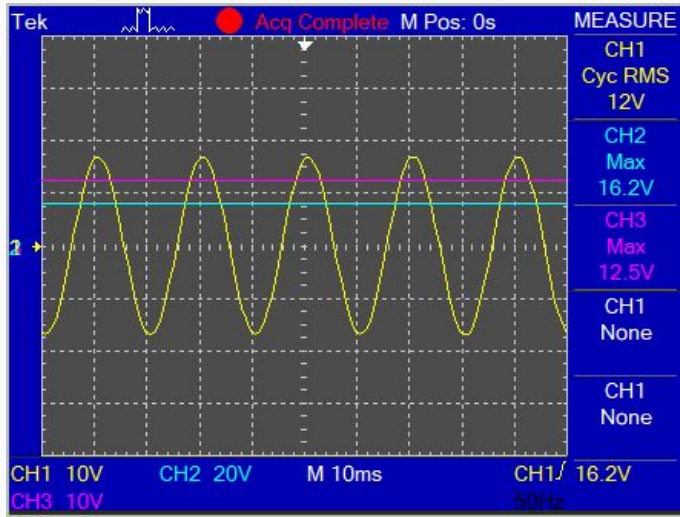


Specificatie tabel

Specificatie tabel

Blok	Specificatie	Min	Max
Elektronisch slot	Werkspanning	9V	12V
	Stroom	500mA(9V)	650mA(12V)
	Totale stroom(8 lockers)	4A	5.2A
Reed sensor	Switching spanning	6V	200V
	Stroom	10mA	1.25A
Raspberry PI 3B+	Spanning	5V	5.1V
	Stroom	1.25 A	3 A

Simulatie



Meting

230V AC - 24V/12VAC

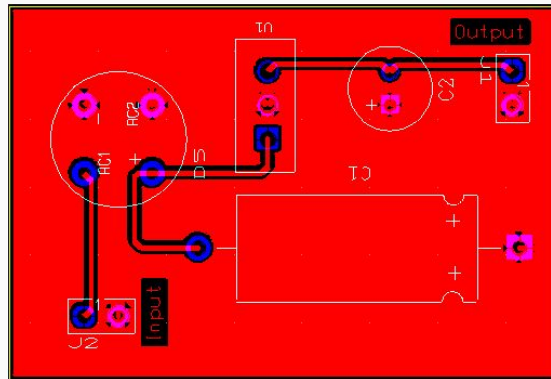
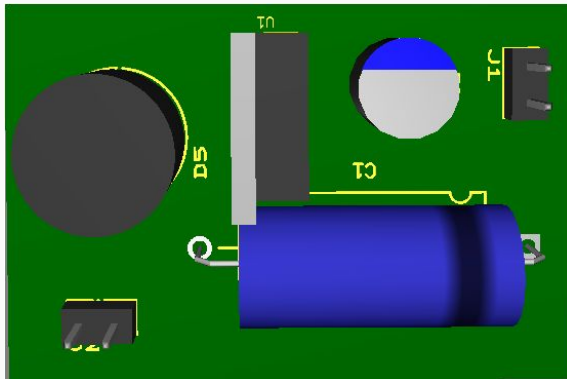
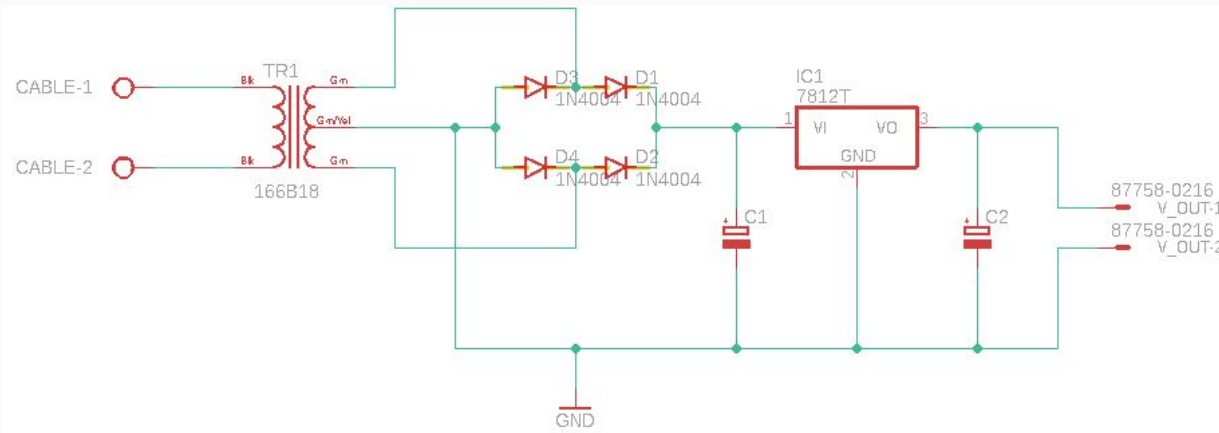


Na diodebrug

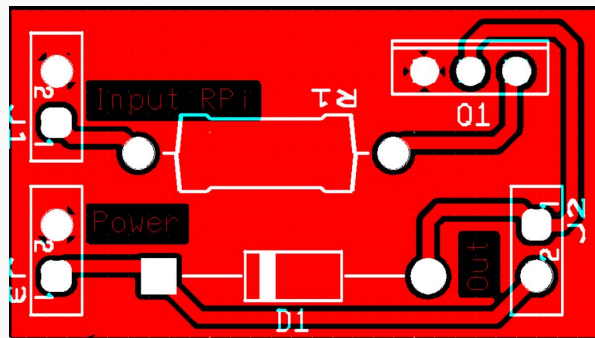
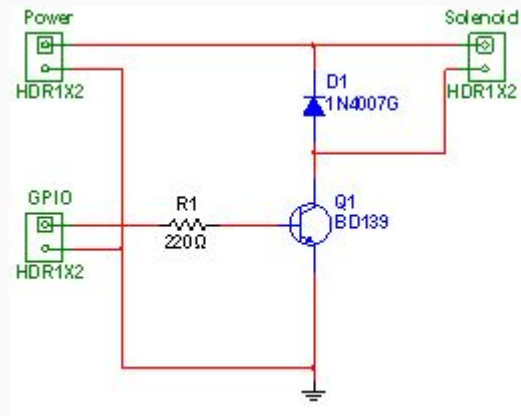


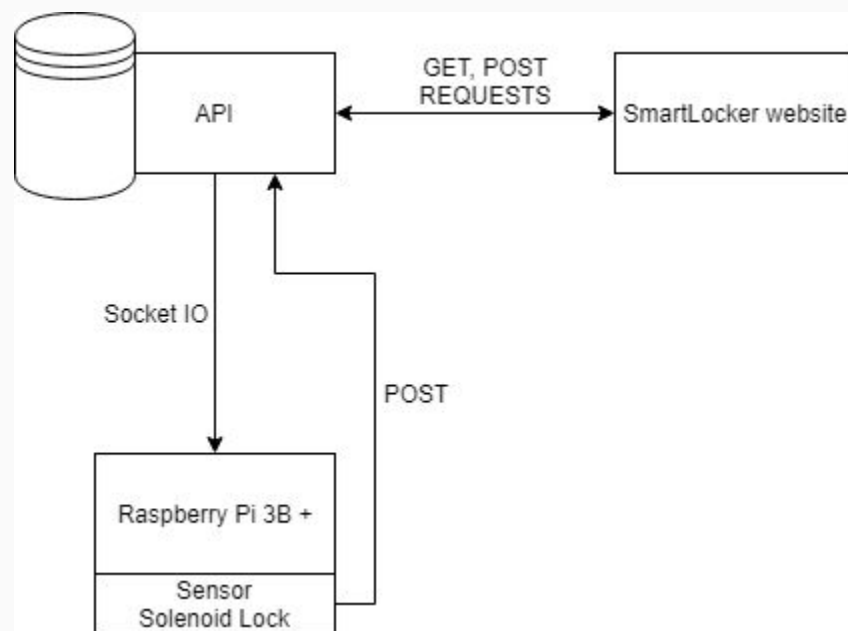
Output

Actuator schakeling



Actuator schakeling

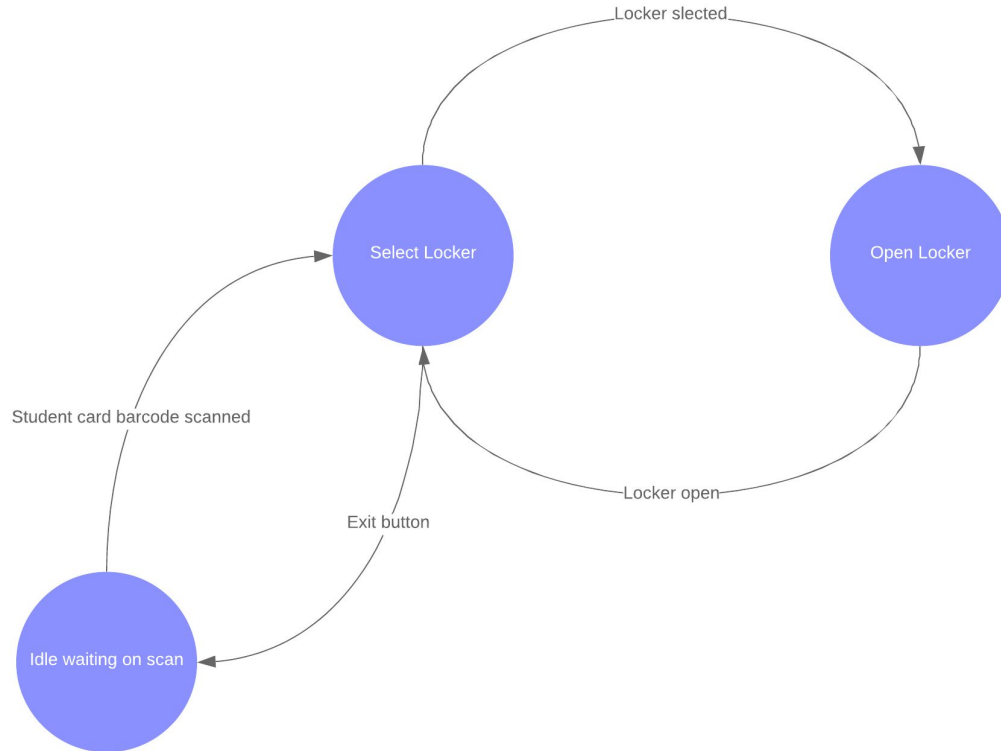




Data In- en Outputs

Data In- en Outputs

Blok	Data In	Data Uit
Raspberry Pi	API calls*	Digital Out
Web Server	API calls*	API calls*
Solenoid lock	12 V	nvt.
Reed Sensor	nvt.	Digital HIGH/LOW



Issues

Security API

Authentication

Oplossing: Token

Authentication application

User accounts maken in verbinding met de active directory van school.

Dashboard voor Administrator.

Uitbreidingen

Uitbreidingen

Payment methode

NFC van smartphone om locker te openen

Ipv barcodescanner een rfid reader

Demo

<https://youtu.be/qA96WcUJMaM>