PiSec

Group 35

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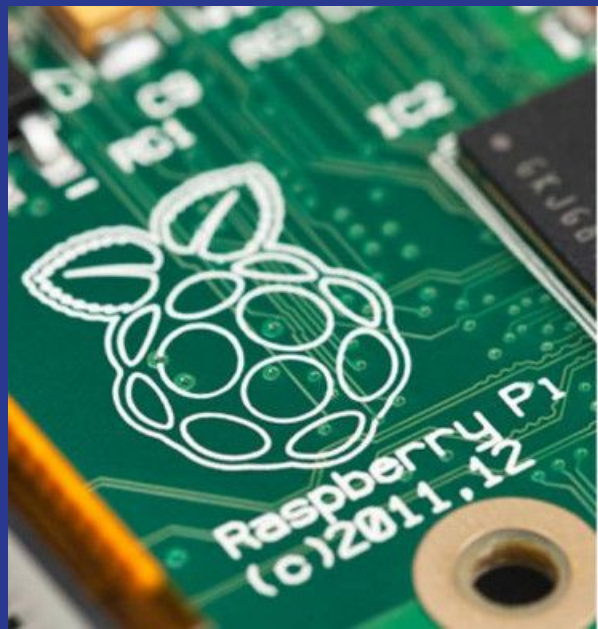


Programming

- Back-end:
  - Java, Tomcat, GPIO library
- Front-end:
  - HTML, CSS and Javascript
- Database:
  - Postgres
- Testing:
  - Junit, JerseyTest, Postman

Design & Wireframe

- User interface

  Simple and intuitive interface

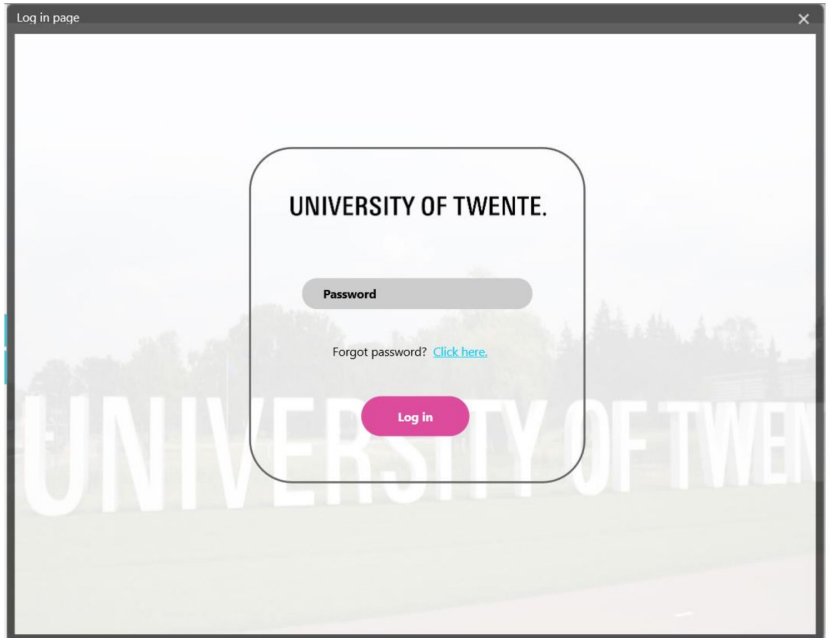
  Web app (should be able on cellphone and desktops)

  User should receive notifications (by email or web alerts)

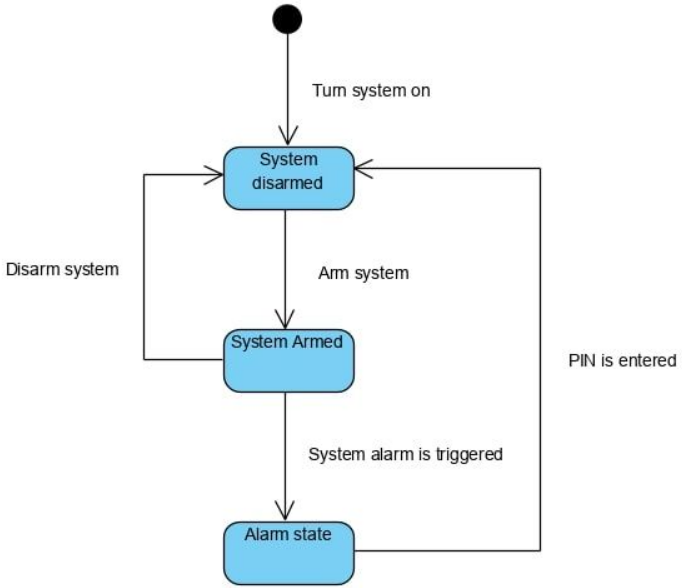
- Wireframe

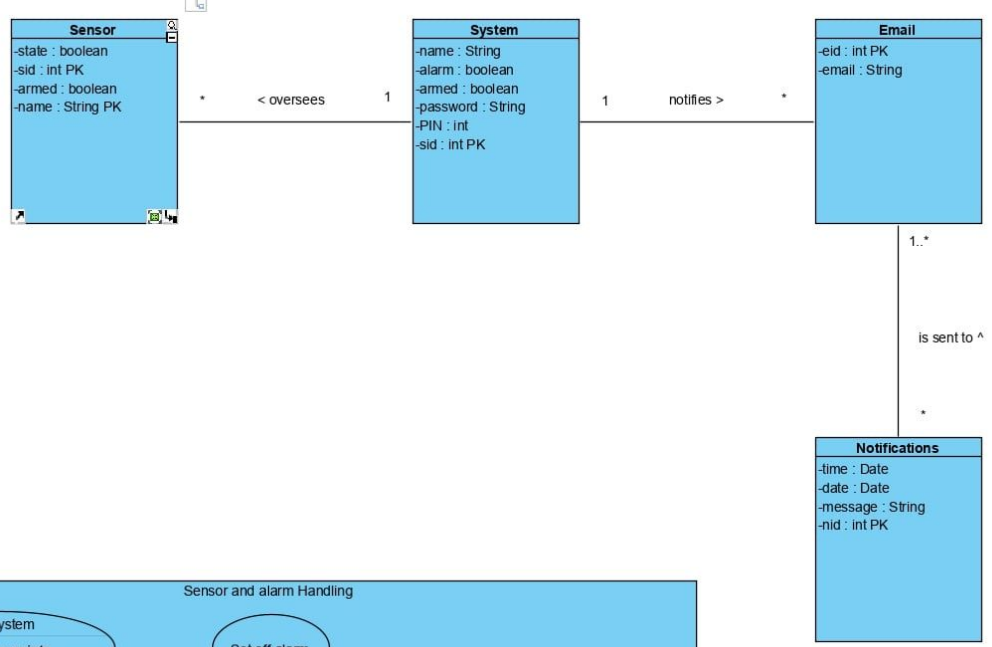
  Mockplus as a main tool

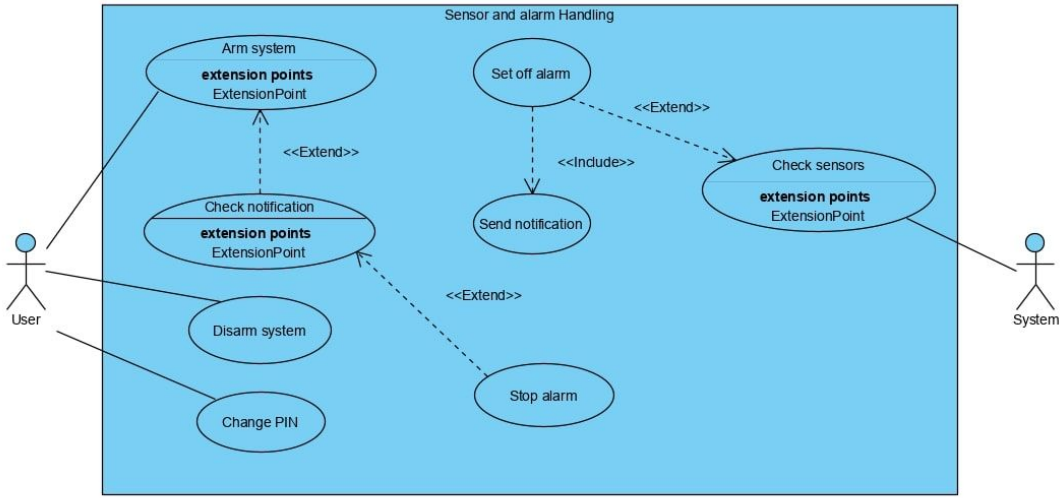
The file was created using Mockplus Classic and the file is a .mp file.



Design


Turn system on
System disarmed
Disarm system
Arm system
System Armed
PIN is entered
System alarm is triggered
Alarm state


Sensor
-state : boolean
-sid : int PK
-armed : boolean
-name : String PK
* < oversees 1
System
-name : String
-alarm : boolean
-armed : boolean
-password : String
-PIN : int
-sid : int PK
1 notifies > *
Email
-eid : int PK
-email : String
1..*
is sent to ^
*
Notifications
-time : Date
-date : Date
-message : String
-nid : int PK


Sensor and alarm Handling
Arm system
extension points
ExtensionPoint
Set off alarm
<<Extend>>
<<Extend>>
<<Include>>
Check sensors
extension points
ExtensionPoint
Check notification
extension points
ExtensionPoint
Send notification
User
<<Extend>>
System
Disarm system
Stop alarm
Change PIN

System overview

- User should login with his/her user, password and pin code
- The system is controlled by the web app, it has three states:

  Disarmed, armed, alarm

- The user can arm/disarm using the pincode.
- When the system is armed and it changes to open state abruptly, the system moves to alarm sate. And the user get a notification.

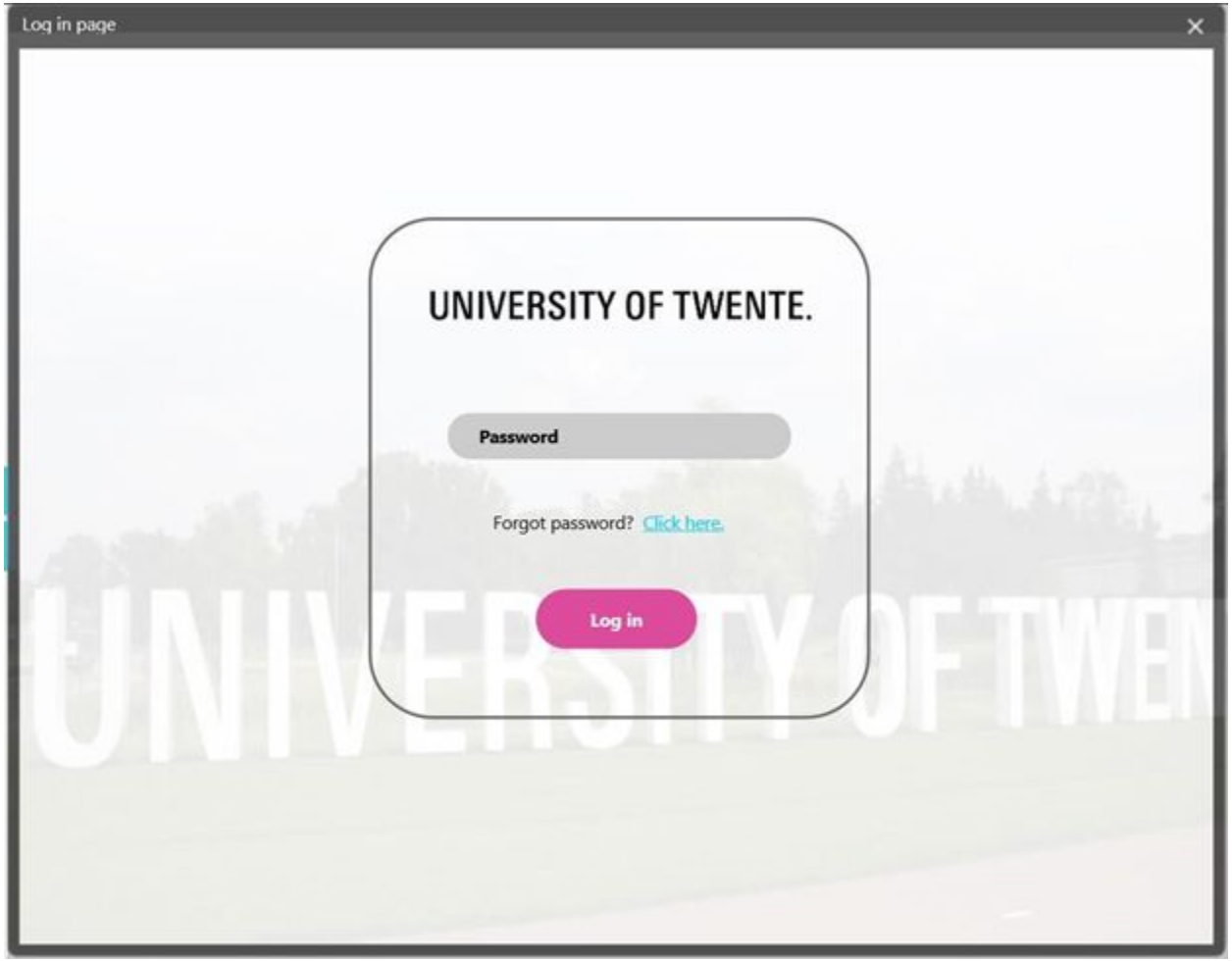
Requirements

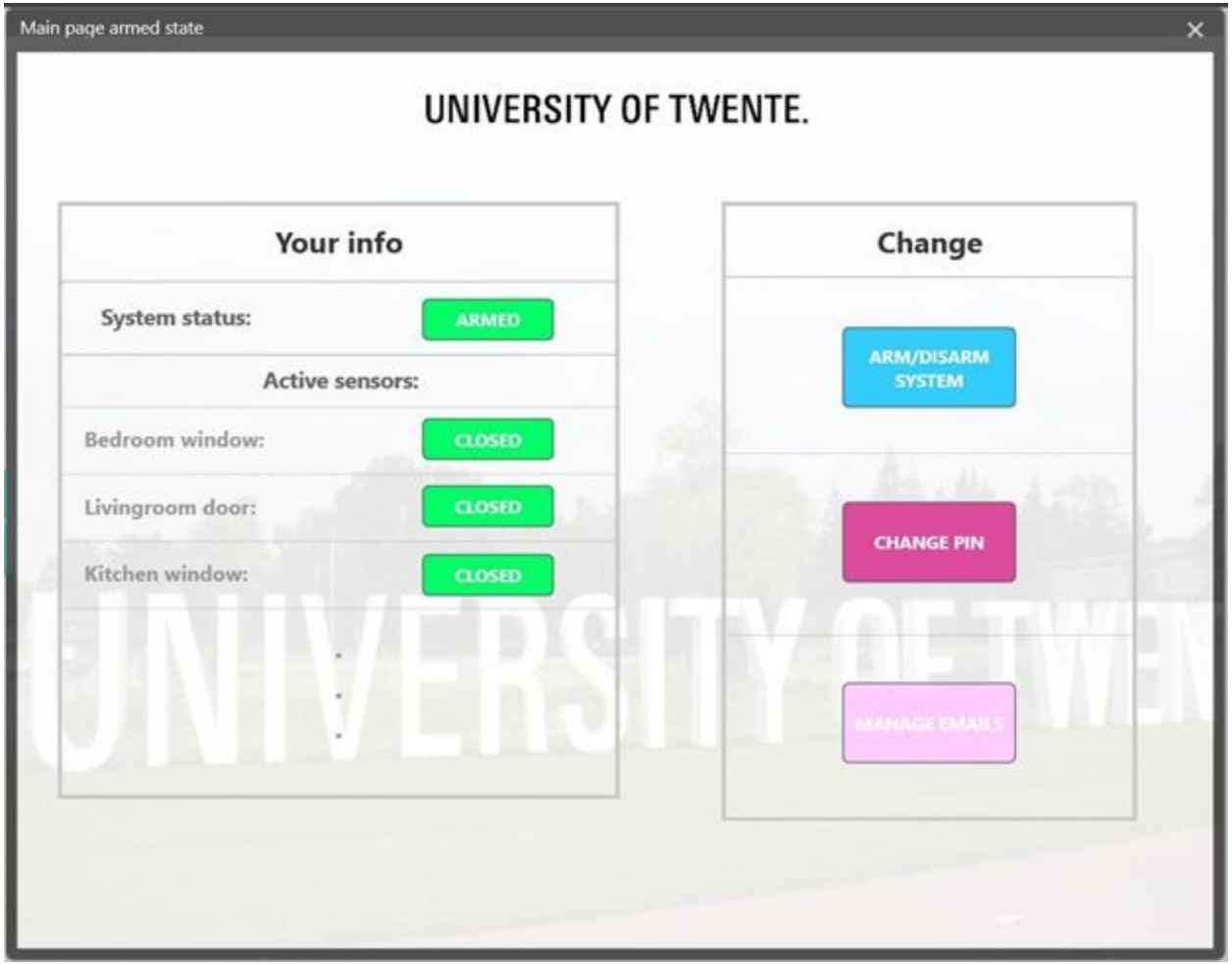
- System can be armed/disarmed through the web interface.
- The delay between the change of state of the sensor and web app should be less than 1 sec.
- The login process is secure and not injectable.
- User passwords are stored in a secure (hash + salt) manner

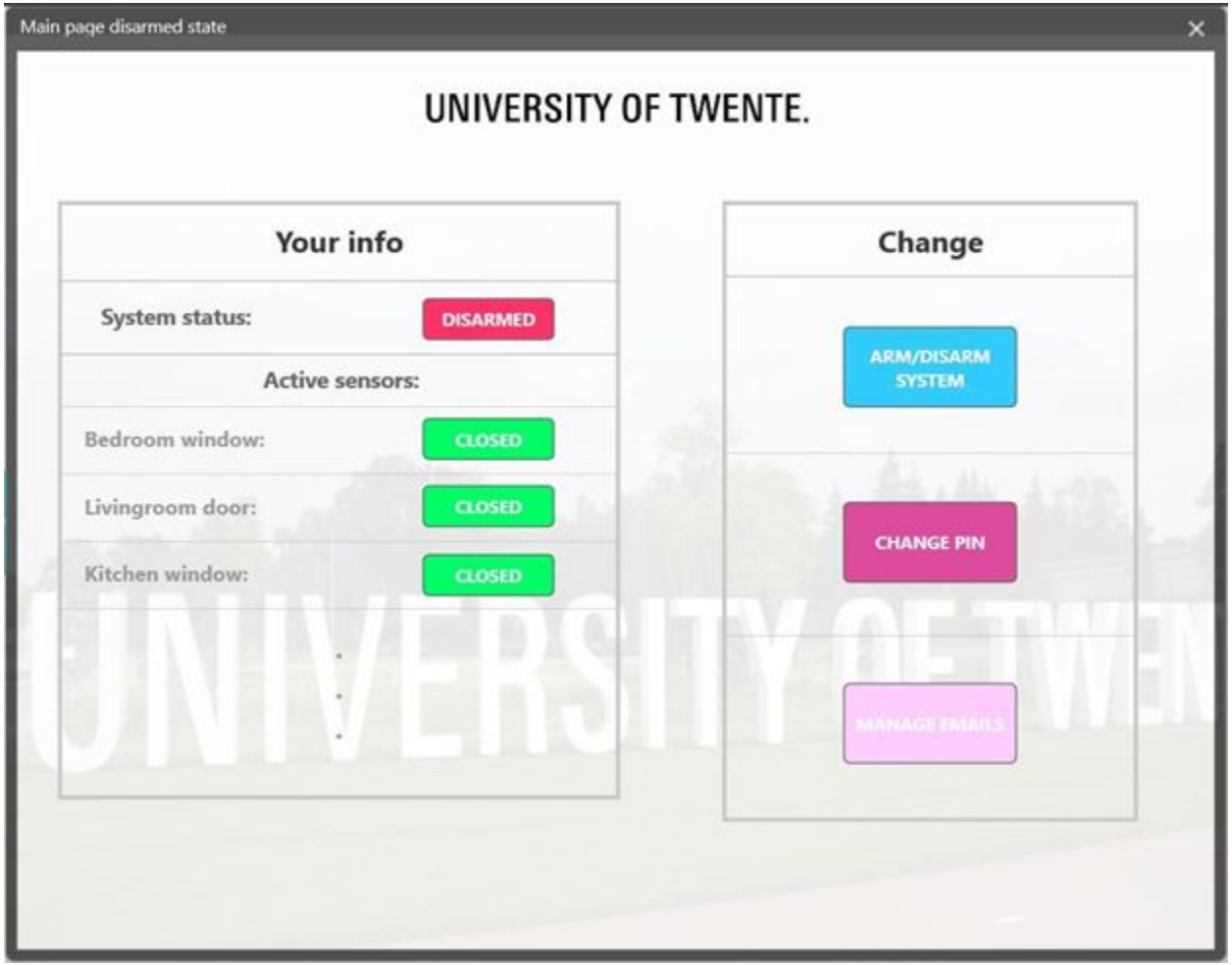
Milestones

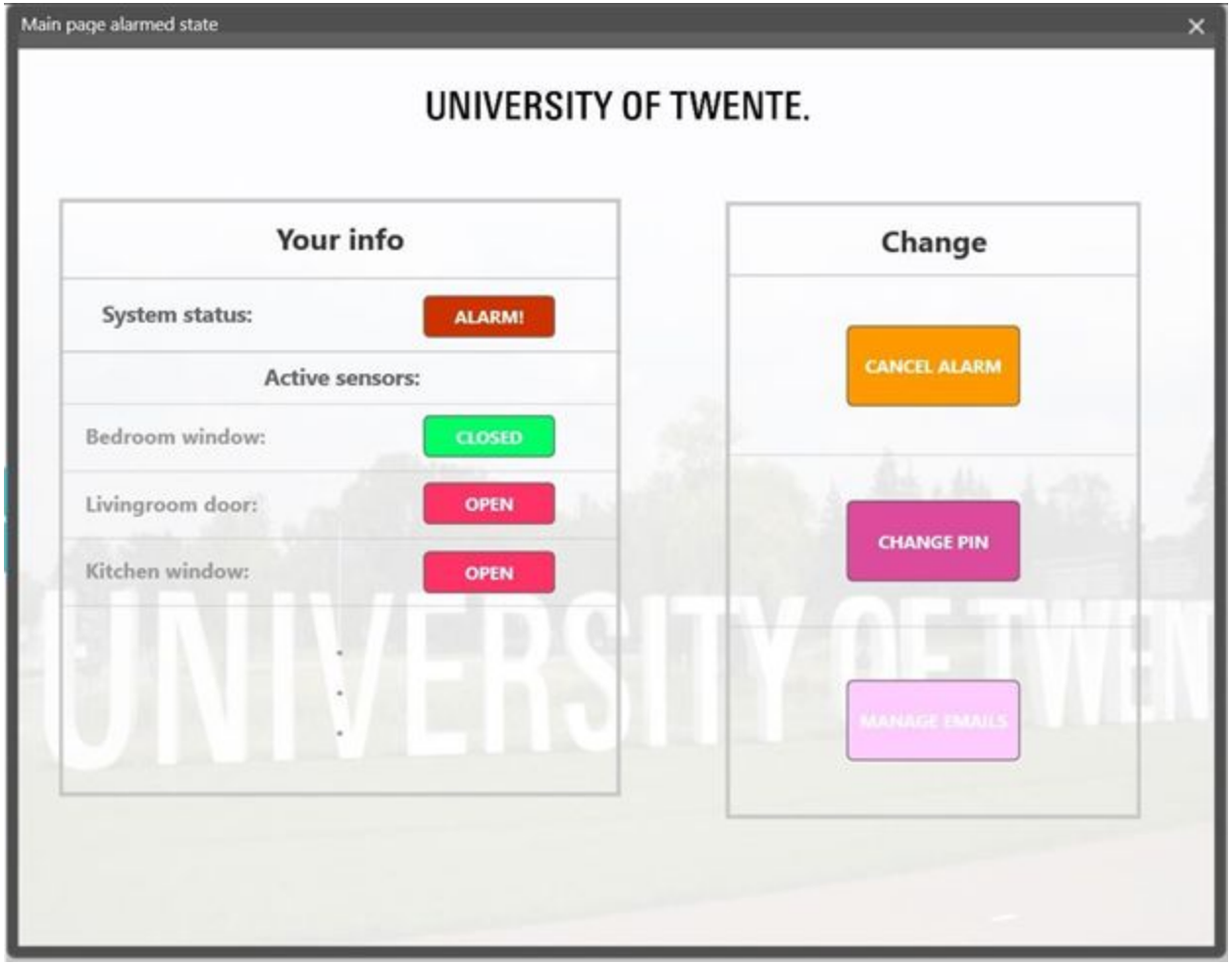
- Being able to read date and interpret it from the sensor (ensure the state of the sensor).
- Display each status on the webapp
- Arming and disarming the system
- Notification system (MVP ready)
- Testing and additional requirements

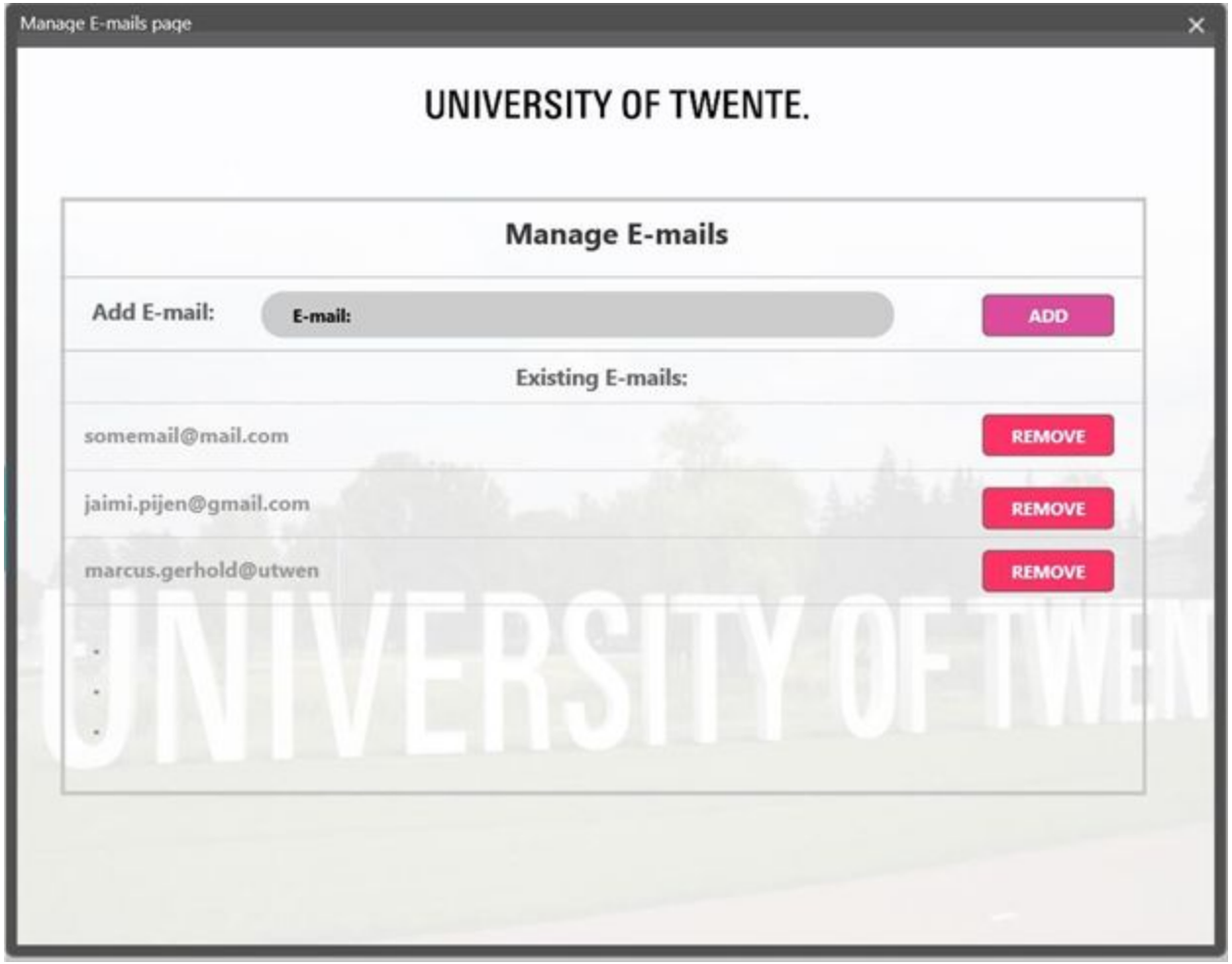
Mockup

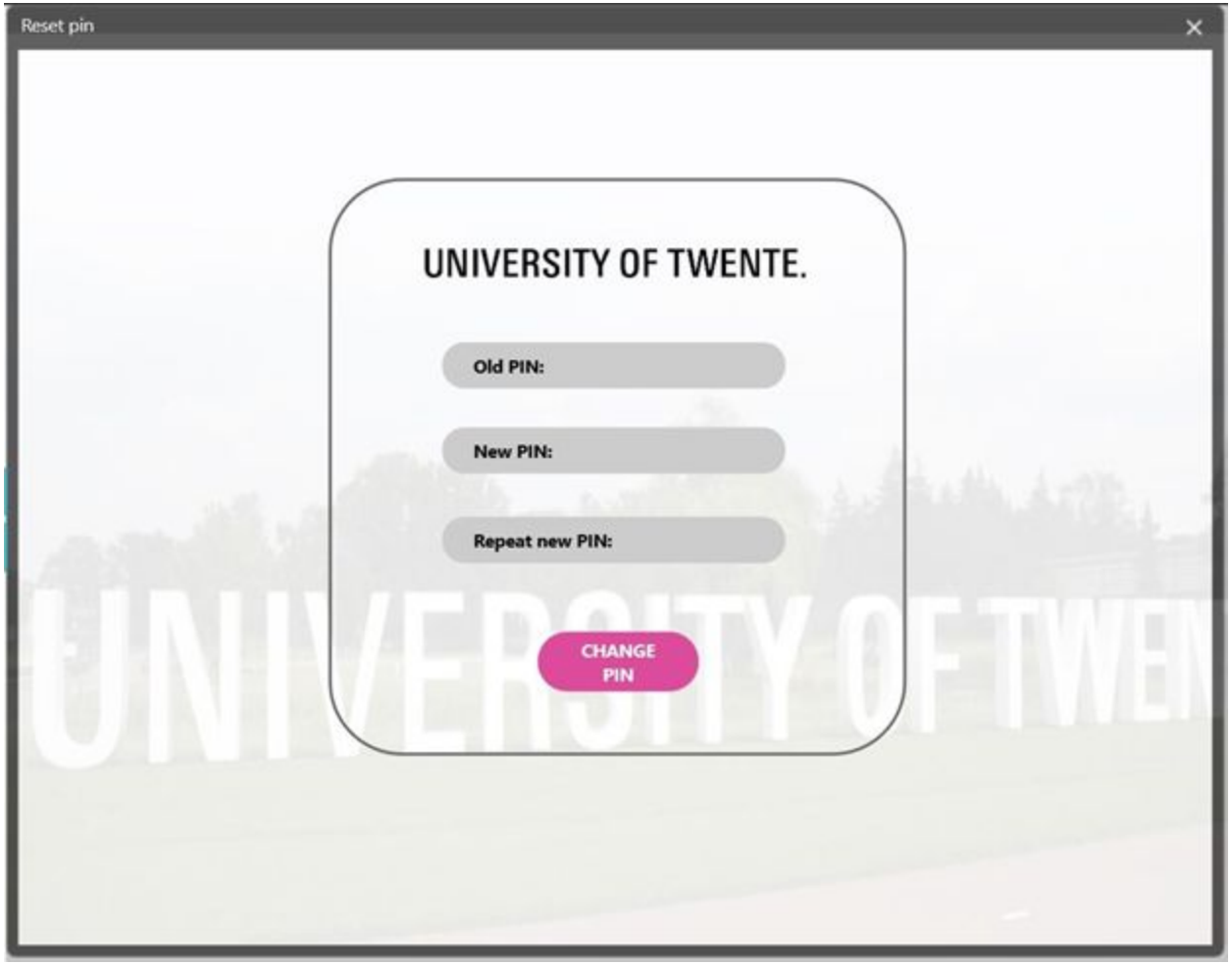

Log in page
UNIVERSITY OF TWENTE.
Password
Forgot password? Click here.
Log in


Main page armed state
UNIVERSITY OF TWENTE.
Your info
System status:
ARMED
Active sensors:
Bedroom window:
CLOSED
Livingroom door:
CLOSED
Kitchen window:
CLOSED
Change
ARM/DISARM SYSTEM
CHANGE PIN
MANAGE EMAILS

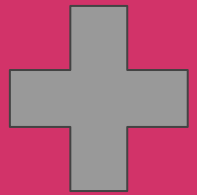

Main page disarmed state
UNIVERSITY OF TWENTE.
Your info
System status:
DISARMED
Active sensors:
Bedroom window:
CLOSED
Livingroom door:
CLOSED
Kitchen window:
CLOSED
Change
ARM/DISARM SYSTEM
CHANGE PIN
MANAGE EMAILS


Main page alarmed state
UNIVERSITY OF TWENTE.
Your info
System status:
ALARM!
Active sensors:
Bedroom window:
CLOSED
Livingroom door:
OPEN
Kitchen window:
OPEN
Change
CANCEL ALARM
CHANGE PIN
MANAGE EMAILS


Manage E-mails page
UNIVERSITY OF TWENTE.
Manage E-mails
Add E-mail:
E-mail:
ADD
Existing E-mails:
somemail@mail.com
REMOVE
jaimi.pijen@gmail.com
REMOVE
marcus.gerhold@utwen
REMOVE


Reset pin
UNIVERSITY OF TWENTE.
Old PIN:
New PIN:
Repeat new PIN:
CHANGE PIN

Communication and project management



Q&A

Do you have any questions?