Group:

Alaa ALMARAWI

Meryem Ezber

Beyza Koşer

Project:

Server-client-connetion-Door on Raspberry Pi

Computer Networks

Prof. Dr. Ali Yılmaz ÇAMURCU

Arş. Gör. Samet KAYA

Arş. Gör. Muhammet Alkan

Contents

1- Summary:

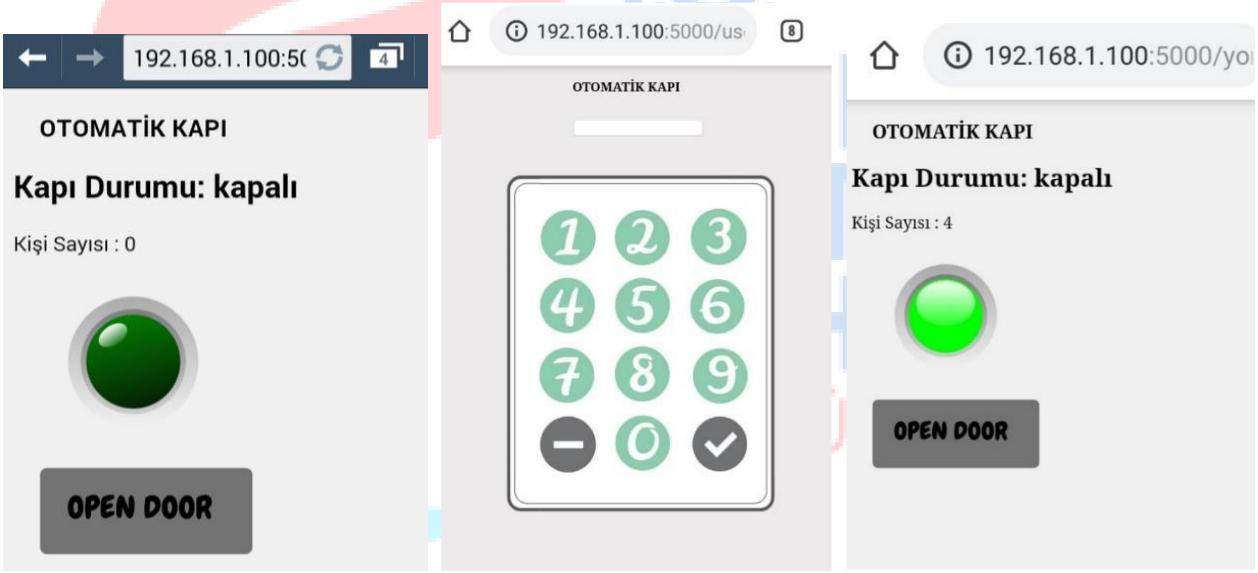
Remote controlled Automatic door system.

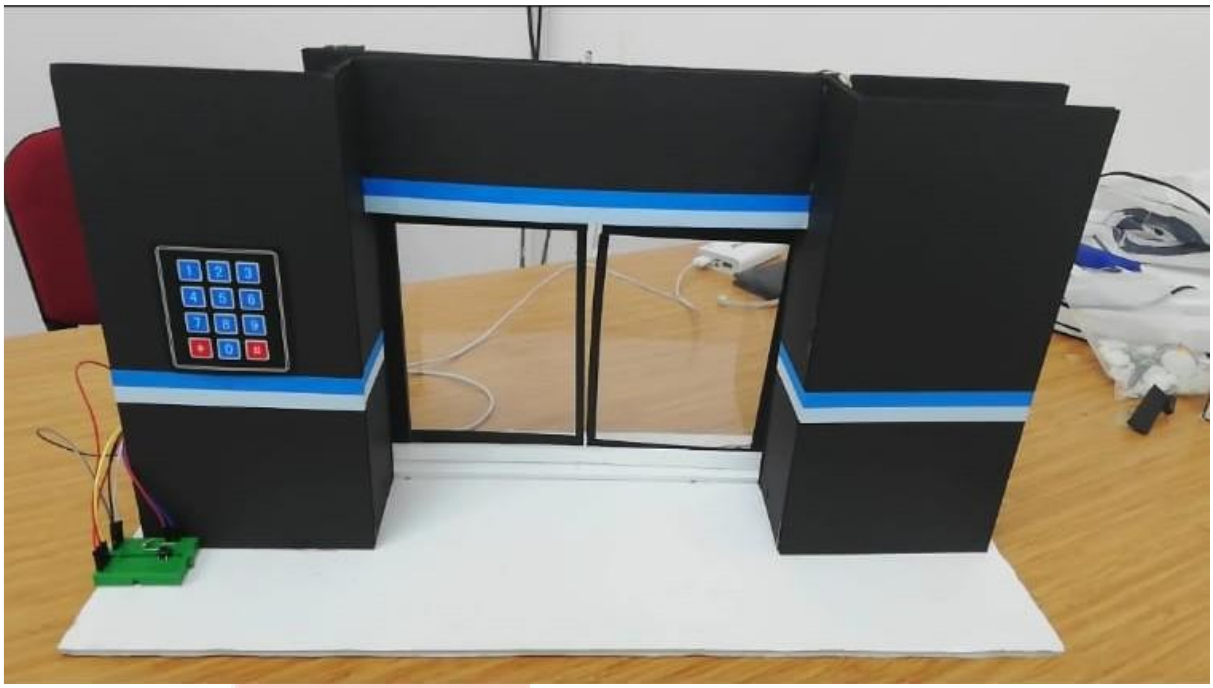
- Manager and user UI
- Passed person count
- Open the door when right password entered in user UI
- Open the door when the button (bell) is pressed and manager approved.
- Present the door status and bell status in manager UI

Used materials:

- Hardware :
  - jumper cables
  - usb cable,SD card, adaptor, Raspberry Pi (platfrom)
  - 28BYJ-48 stepper motor X2
  - Stepper motor driver card X2
- Software:
  - Raspberry Pi oparating system (linux core)
  - Python
  - Flask for server-client connection using python,html,css
- Command to find my IP address:
  sudo ifconfig >> inet adrs = 192.168.1.12/24

2- UI Design:





Vedio:

https://photos.app.goo.gl/rSYdhb5oYUqWVXym6 manager UI

https://photos.app.goo.gl/8fqmpDqV1AVJJJ9j6 user UI

https://photos.app.goo.gl/ccV1BeydWL445VS28

- How it works :

- Power the raspberry and the server will automatically run, if not run the app.py file.
- Connect the server side (raspberry pi) and client side (mobile/computer..) to the same network.
- Get raspberry ip and request it from the browser of client side (mobile/computer..)
- The manager UI is refreshed once a second to follow the button status.
- We made the raspberry ip as a static ip to prevent changing ip every new connection.

3- Sources:

https://maker.robotistan.com/raspberry-pi-dersleri-13-step-motor-kontrolu/http://flask.pocoo.org/
https://aryaboudaie.com/python/technical/educational/web/flask/2018/10/17/flask.html
https://projects.raspberrypi.org/en/projects/python-web-server-with-flask