Parking System

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TABLE OF CONTENTS

01

Parking System

Parking System Concept & Requirements

CONCEPT

The concept of the project is about designing and programing a Parking System for one of the Logistics sites under SISCO.

REQUIREMENTS

- The system should have a registration process through RFID.
- The system should count each Companies entered/exited trucks in the site.
- The system should allows/denies the access of the trucks based on the number of registered parking lots.

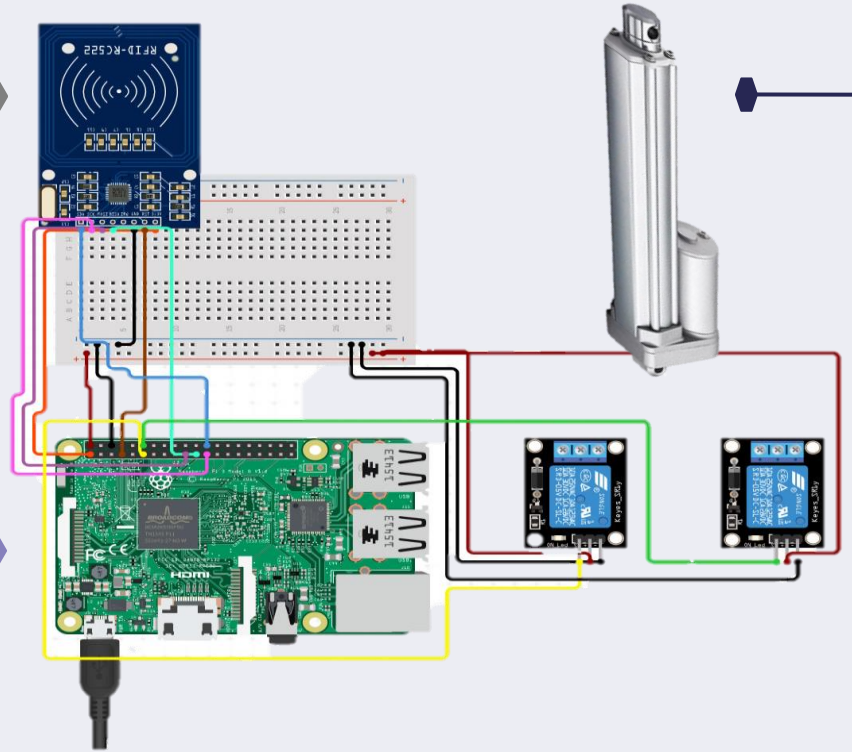
02

Hardware Components

Parking System Diagram

RFID RC522

Linear Actuator



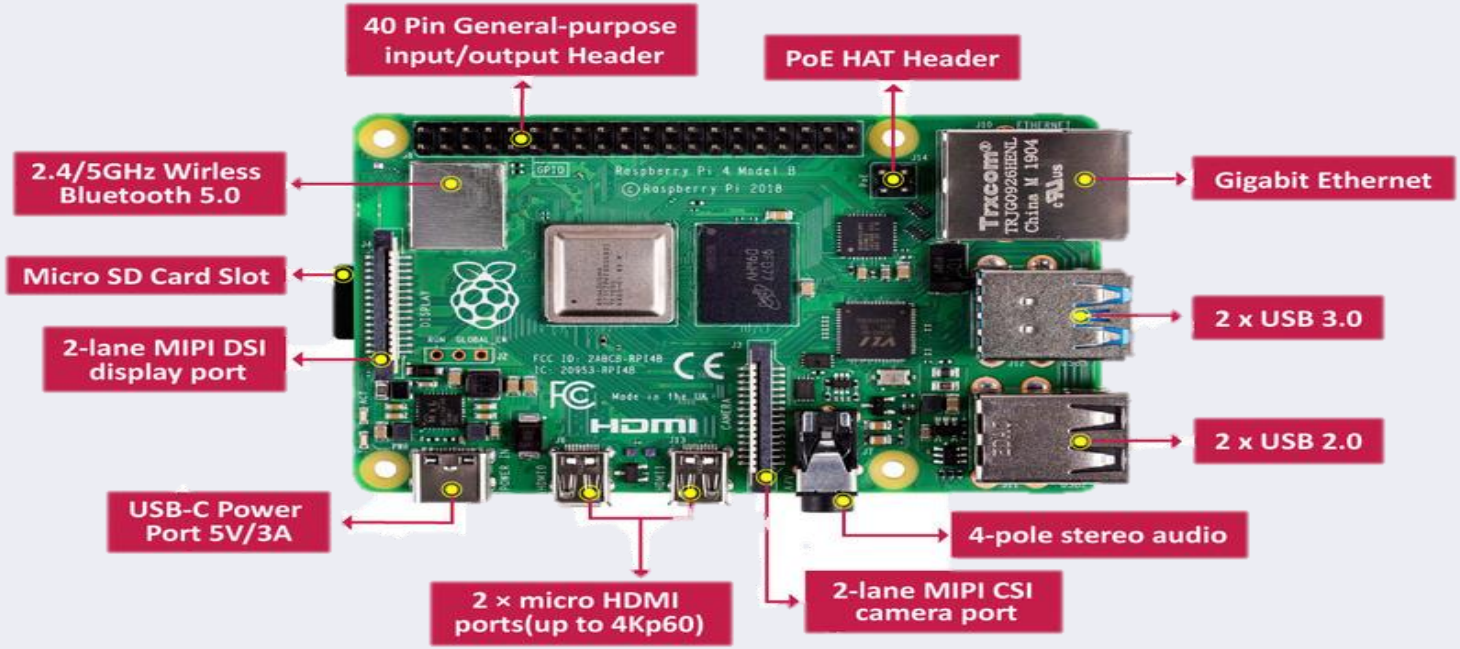
Relays

Raspberry Pi

What is Raspberry Pi ?

The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing.

Raspberry Pi 4 Model B



Raspberry Pi Pros & Cons

Pros	Cons
• Multiple Sensors	• Missing eMMC Internal Storage
• Supports all type of Codes	• Impractical as a Desktop Computer
• Faster Processor	• Overheating
• Can be Used as a Portable Computer	

Radio Frequency Identification

RFID is a technology that uses radio waves to identify and track objects.

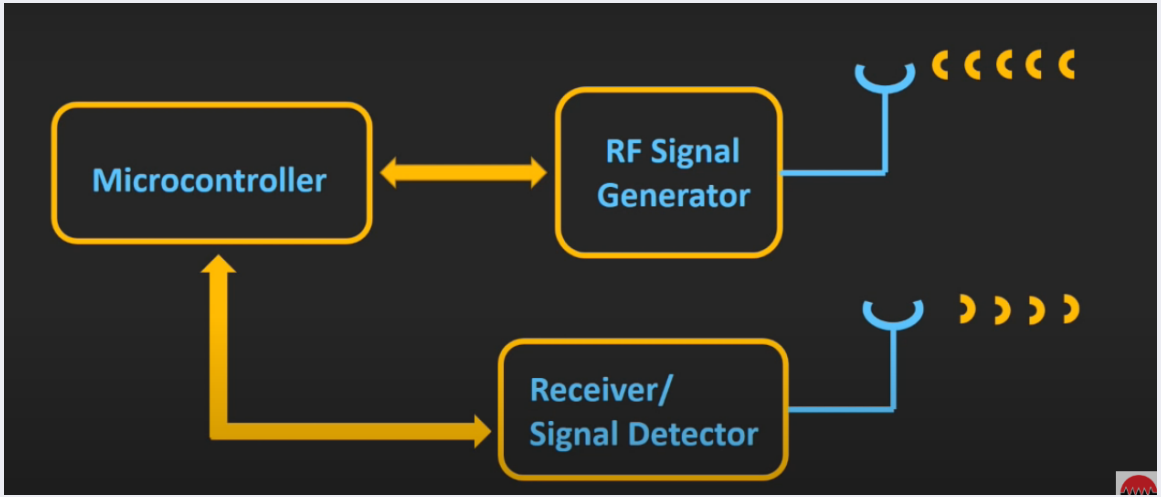
RFID Applications

RFID Library Security Gate

RFID Race Timing System

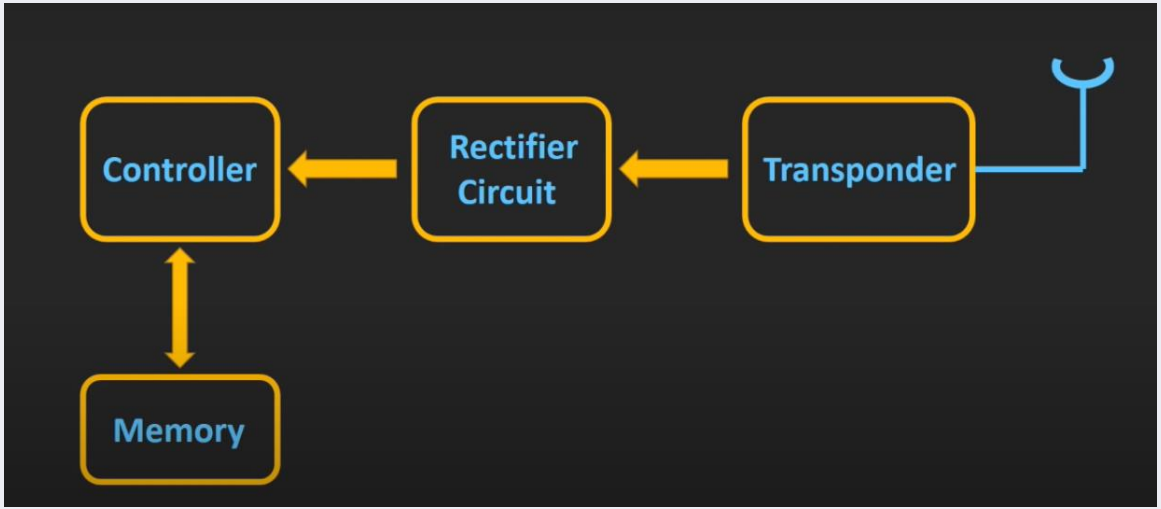
RFID System Components: Reader&Tag

1-Reader

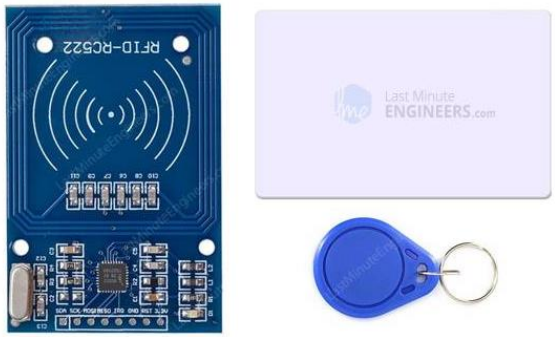


RFID System Components: Reader&Tag

2-Tag

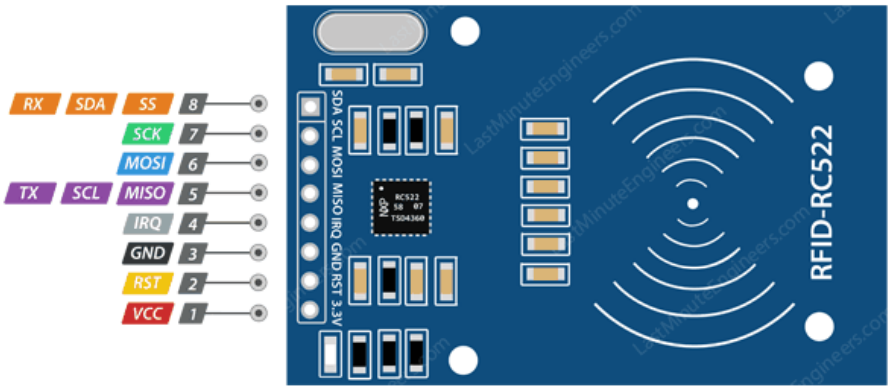


RFID RC522



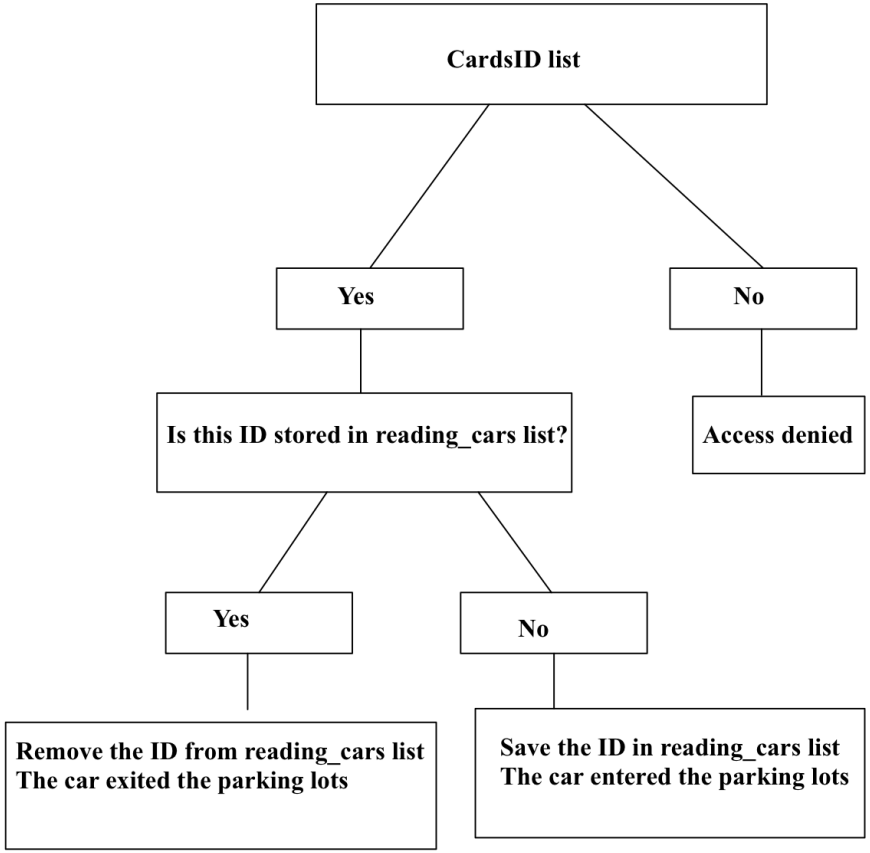
Frequency Range	13.56 MHz ISM Band
Host Interface	SPI / I2C / UART
Operating Supply Voltage	2.5 V to 3.3 V
Max. Operating Current	13-26mA
Min. Current(Power down)	10µA
Logic Inputs	5V Tolerant
Read Range	5 cm

RFID RC522


RX
SDA
SS
8
SCK
7
MOSI
6
TX
SCL
MISO
5
IRQ
4
GND
3
RST
2
VCC
1
SDA SCL MOSI MISO IRQ GND RST 3.3V
RFID-RC522
RC522 Pinout
Last Minute
ENGINEERS.com

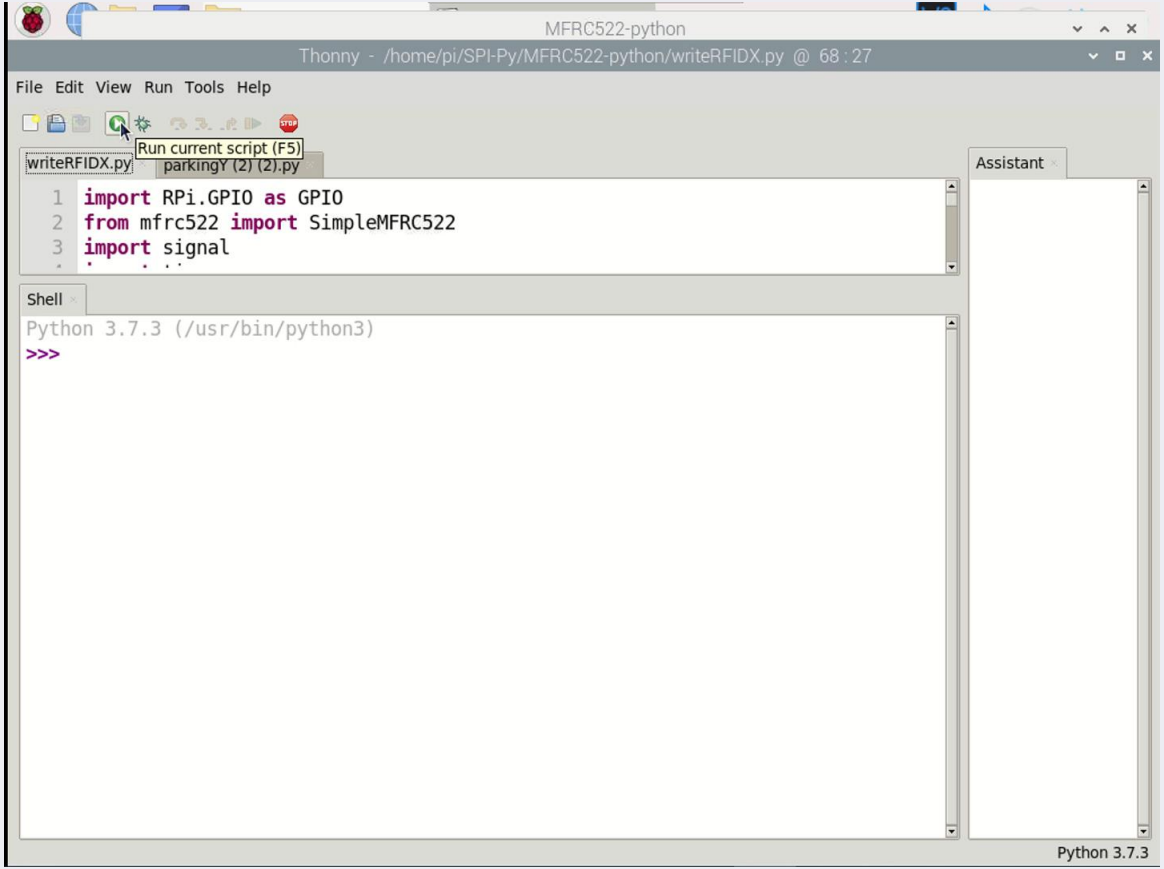
03 Coding Concept

Coding Concept

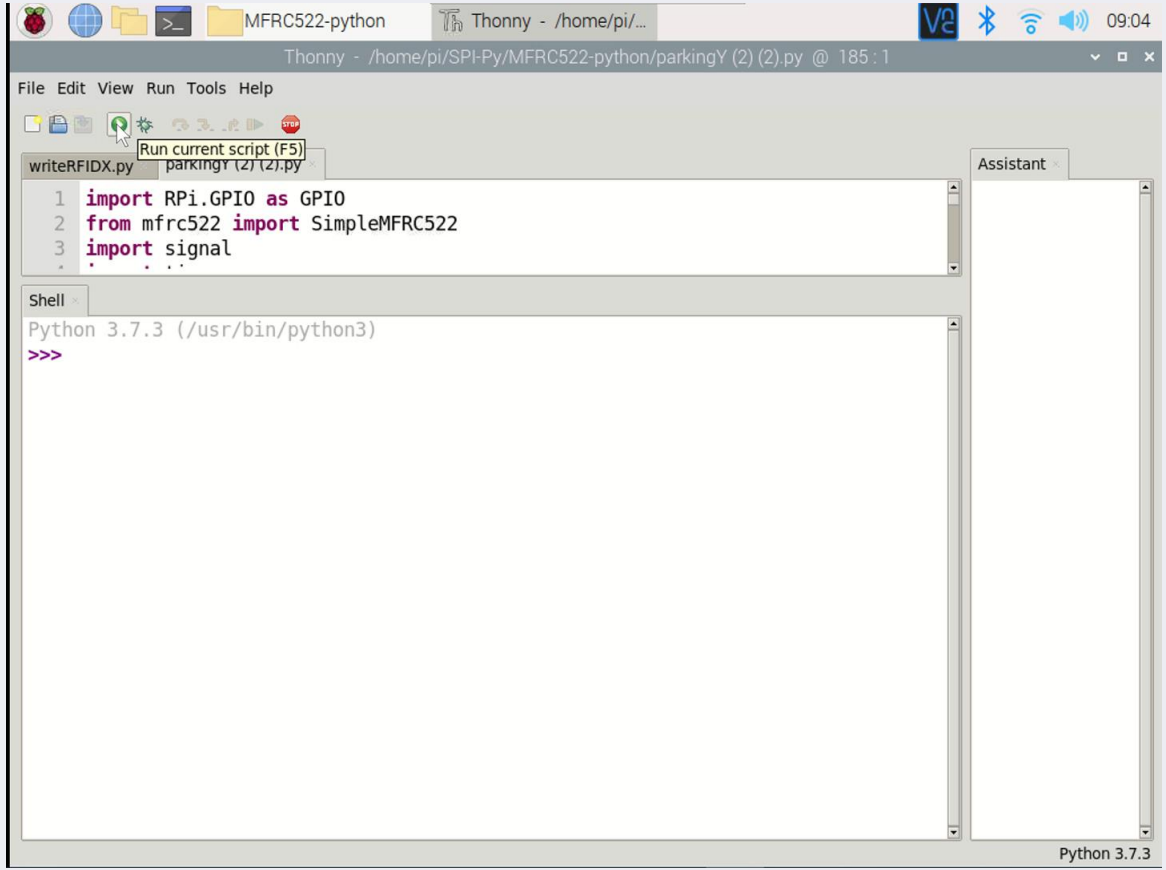


04 Prototype Demonstration

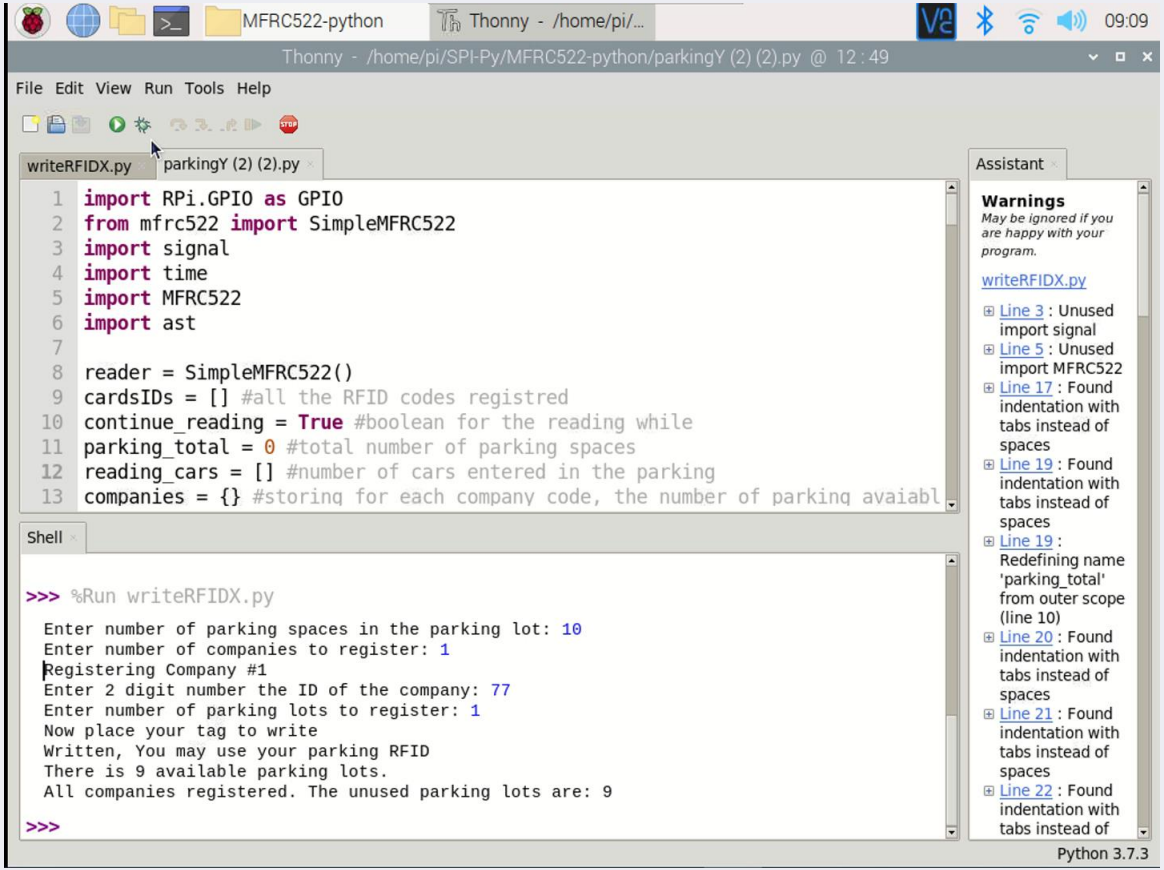
Registering Tags



Reading Tags



Access Denied Case




RC522

THANKS!

Do you have any questions?