

RFID Attendance System



USER
MANUAL

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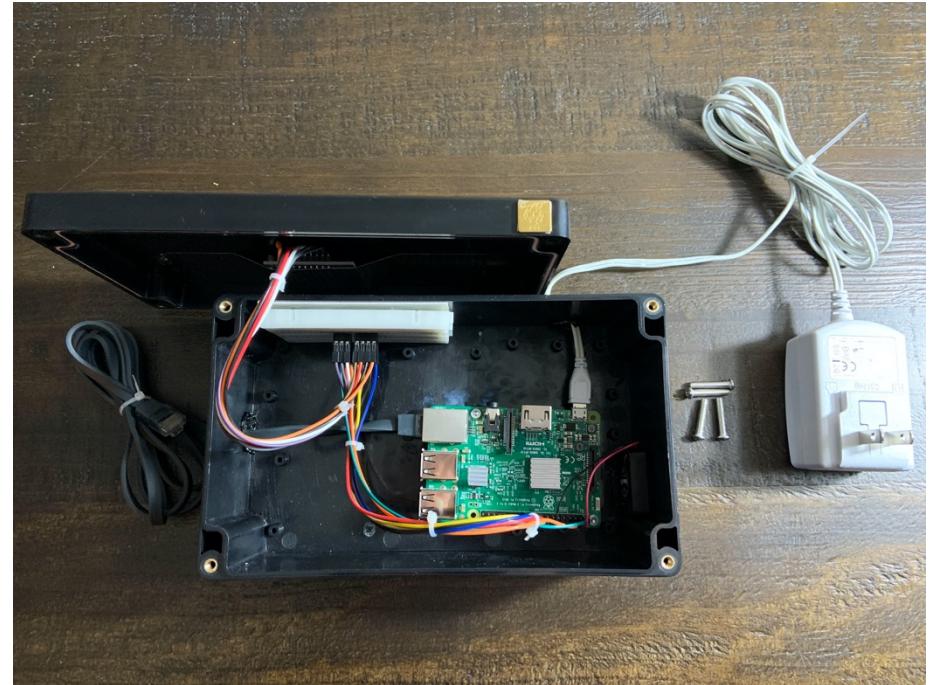
Description of Product

This attendance system will log data that is tapped to its RFID sensors. Once data is created for a user on the Raspberry Pi, the user will tap his/her card to it upon entering the designated room. Data will consist of the date and time at which the student arrived or left, the name of the student with their Tag's unique ID number and any other relevant minimal data that may be associated with the user. This data is then sent to an SQL database where it is displayed on a simple web interface. This web interface will allow you to check the user's attendance and view the exact time and date that the card was tapped to the RFID reader.

Hardware Included

1. Raspberry Pi
2. Micro SD card running Raspbian
3. Power Supply
4. Ethernet Cord
5. RC522 RFID Reader
6. Breadboard
7. Breadboard wires

Image of Overview



Warning!

Do not open housing as internal components are fragile.

Easy Setup

Step 1. Plug in Device to wall outlet and plug ethernet into router or switch.

Step 2. Open the Command Prompt on your Windows PC.

Step 3. Type the following command in the prompt:

arp -a

Step 4. Locate the MAC address of your Attendance System. *This systems MAC address is:*

B8:27:EB:A1:6B:DF

Step 5. Note the *Internet Address* on the left that corresponds to the *Physical Address*.

(For example, the current IP address for **B8:27:EB:A1:6B:DF** is **192.168.1.14** in the demonstration to the right.)

Easy Setup

Command Prompt

```
Microsoft Windows [Version 10.0.18362.1139]
(c) 2019 Microsoft Corporation. All rights reserved.
```

```
C:\Users\John Hall>arp -a
```

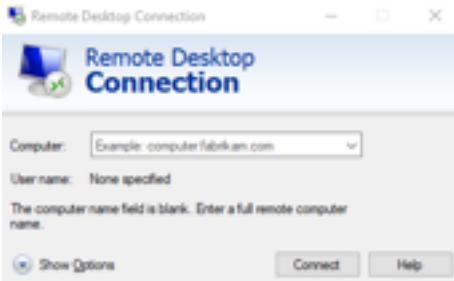
Interface: 192.168.1.11 --- 0xc	Internet Address	Physical Address	Type
	192.168.1.1	10-0c-6b-45-6c-6c	dynamic
	192.168.1.4	bc-83-85-78-95-7f	dynamic
	192.168.1.5	a4-d1-8c-62-62-78	dynamic
	192.168.1.12	06-d6-25-48-69-12	dynamic
	192.168.1.14	b8-27-eb-a1-6b-df	dynamic
	192.168.1.18	34-9f-7b-11-12-ee	dynamic
	192.168.1.255	ff-ff-ff-ff-ff-ff	static
	224.0.0.22	01-00-5e-00-00-16	static
	224.0.0.251	01-00-5e-00-00-fb	static
	224.0.0.252	01-00-5e-00-00-fc	static
	239.255.255.250	01-00-5e-7f-ff-fa	static
	255.255.255.255	ff-ff-ff-ff-ff-ff	static

```
c:\Users\John Hall>
```

Easy Connection

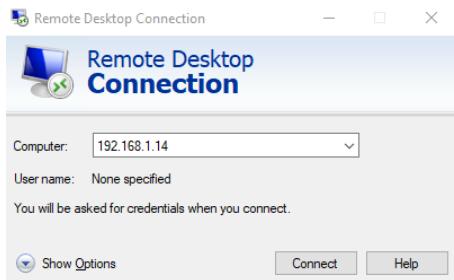
Step 6.

Open the application *Remote Desktop Connection* on a Windows PC.



Step 7.

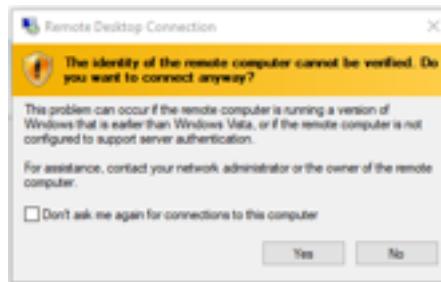
Type in the current *IP Address* that was noted from Step 5 in the search bar.



Easy Connection

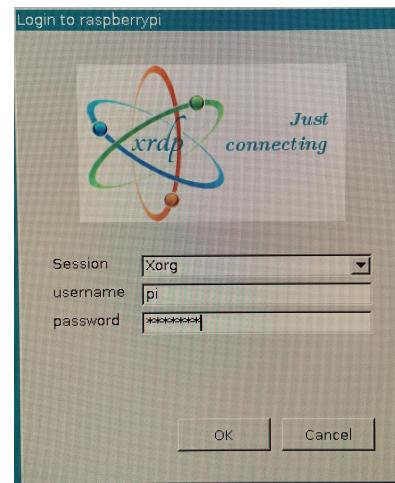
Step 8.

Select Yes on the pop-up dialog box.



Step 9.

Type in the credentials for each the *Username* and *Password*. The credentials are as follows:
username: pi
password: A-State



User Implementation

Step 10.

Open the Terminal for the Pi and type the following command:

```
cd ~/attendancesystem/CaS/
```

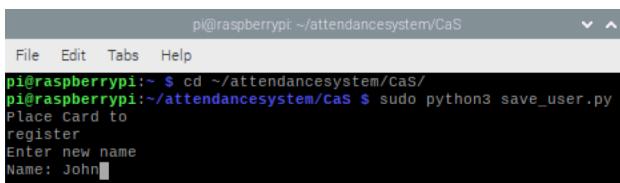


```
pi@raspberrypi: ~$ cd ~/attendancesystem/CaS/  
File Edit Tabs Help  
pi@raspberrypi:~$ cd ~/attendancesystem/CaS/  
pi@raspberrypi:~/attendancesystem/CaS $
```

Step 11.

Next, type the following command:

```
sudo python3 save_user.py
```



```
pi@raspberrypi: ~$ cd ~/attendancesystem/CaS/  
pi@raspberrypi:~/attendancesystem/CaS $ sudo python3 save_user.py  
Place card to  
register  
Enter new name  
Name: John
```

Step 12:

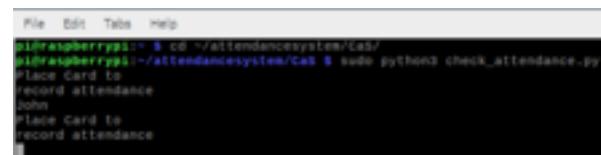
Place Tag on top of RFID sticker above the red line on top of device and type out any desired information that will be relevant to that specific RFID Tag.

User Implementation

Step 13.

To record a user's attendance, type out the following command:

```
sudo python3 check_attendance.py
```



```
File Edit Tabs Help  
pi@raspberrypi: ~$ cd ~/attendancesystem/CaS/  
pi@raspberrypi:~/attendancesystem/CaS $ sudo python3 check_attendance.py  
Place Card to  
record attendance  
John  
Place Card to  
record attendance
```

Step 14.

Repeat step 12.

Step 15. Go to any web browser and type the IP address followed by /attendance/ into the search bar. *For example:*

<http://192.168.1.14/attendance/>



User Implementation

Step 16.

Toggle between *View Users* and *View Attendance* on the Web Interface to view times checked in and out between users.



Step 17:

Select *View Users* to view all users registered to the system.

Users		
#	Name	RFID UID
16	John	251505801557

Step 18:

Select *View Attendance* to view all users registered to the system. (The data corresponds to the User, Date and Time. Information in the example below reflects the day this was recorded.)

Attendance					
	14	15	16	17	18
able	No Data Available	No Data Available	2020-11-16 20:31:12 2020-11-16 20:24:18	No Data Available	No Data Available

DATA NOW VISIBLE TO BE VIEWED OR RECORDED BY USERS ON THE NETWORK.