

ABS^c N

An independent learning project

What is ABSCAN?

ABSCAN is a remotely monitored RFID-based attendance system for various purposes. Created with the integration of NodeMCU v3, Google Apps Script and an independent webserver to utilize its functionalities.



Code & Authors

 <https://github.com/javendzk/Abscan-lot-Project>

 <https://bit.ly/abscan-git-repo> (alternative)

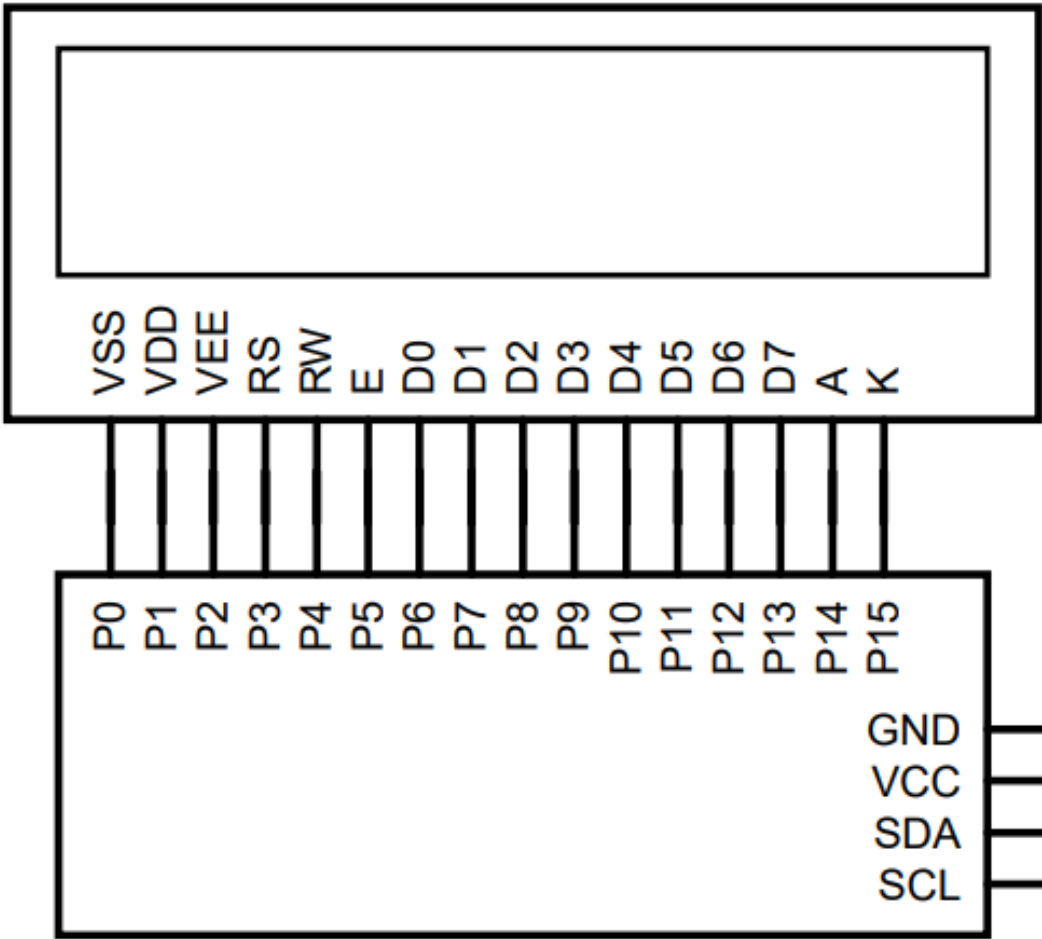
 <https://github.com/javendzk>

 <https://github.com/lilznug>

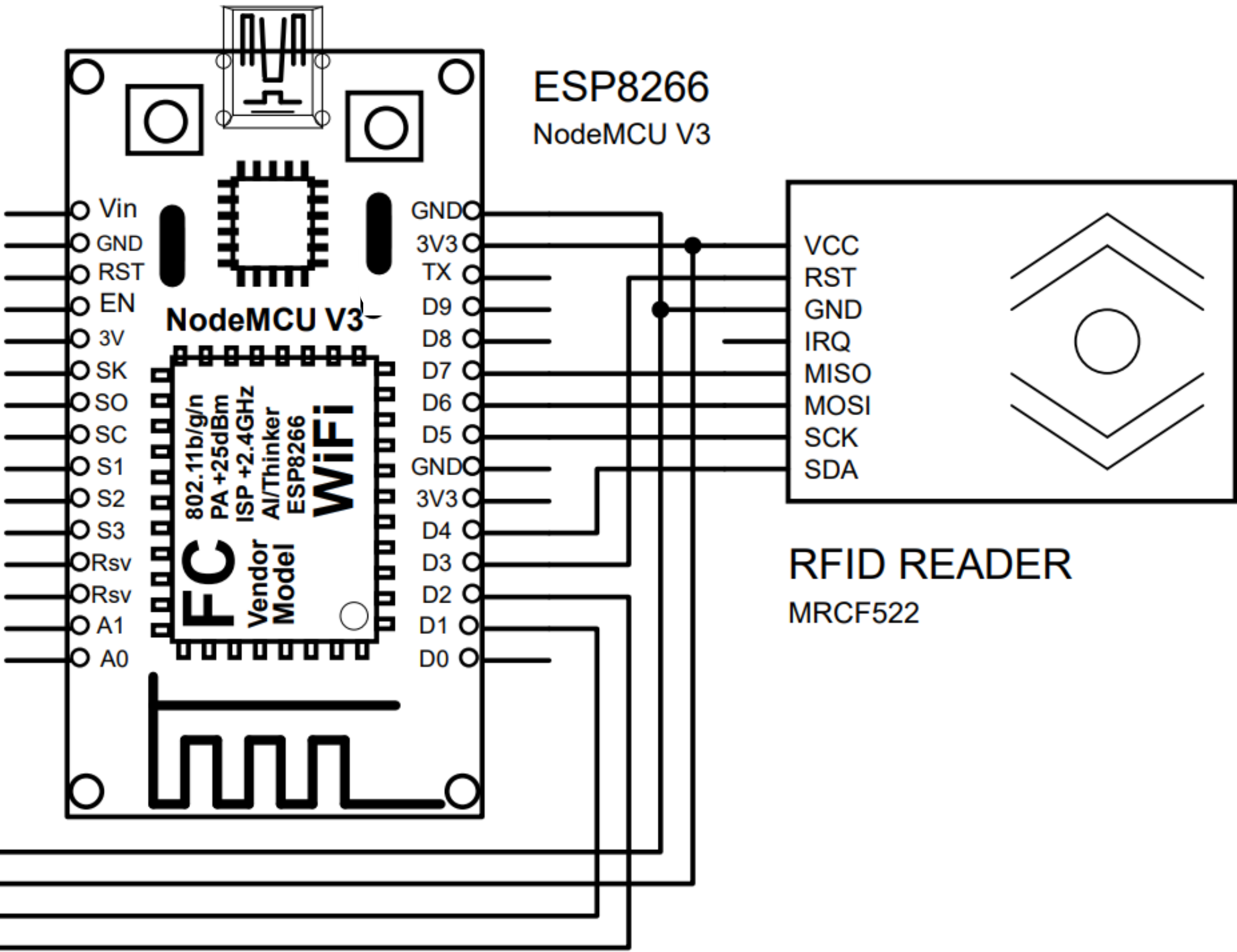
 <https://github.com/dhafinhs>

REMOTE RFID-BASED ATTENDANCE SYSTEM

By Javana Muhammad Dzaki
Dhafin Hamizan Setiawan
Nugroho Ulil Abshar



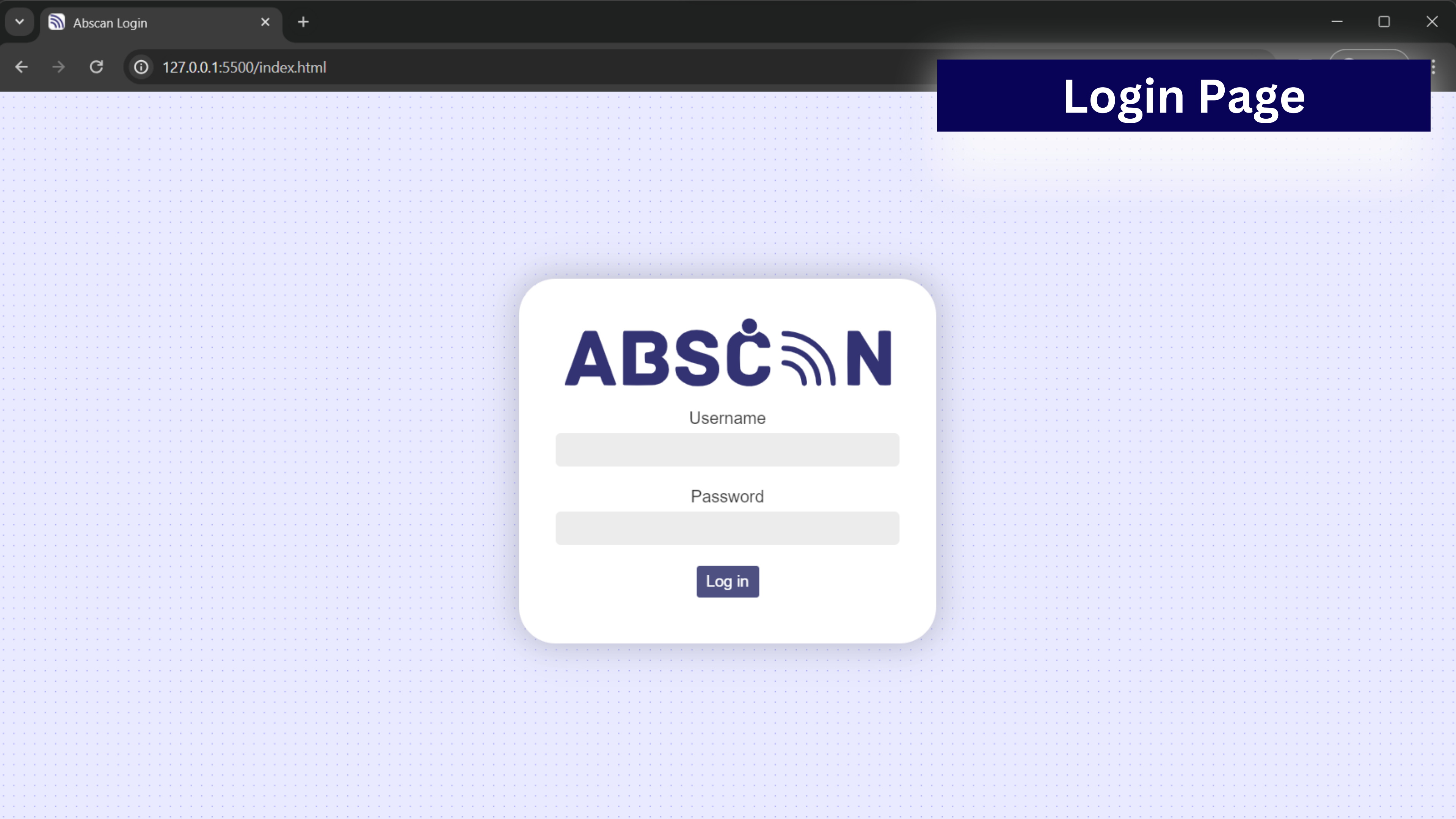
LCD 16 x 2
I2C Interfaced



Connection diagram

Qty	Item	Price	
1	NodeMCU v3 ESP8266	Rp	28,500
1	MFRC522 RFID Reader & Cards	Rp	13,000
1	I2C Interfaced 16x2 LCD	Rp	23,000
1	Breadboard / PCB Dot Matrix	Rp	5,000
-	Wires & Solder	Rp	2,000
		Rp	71,500

Component cost / unit



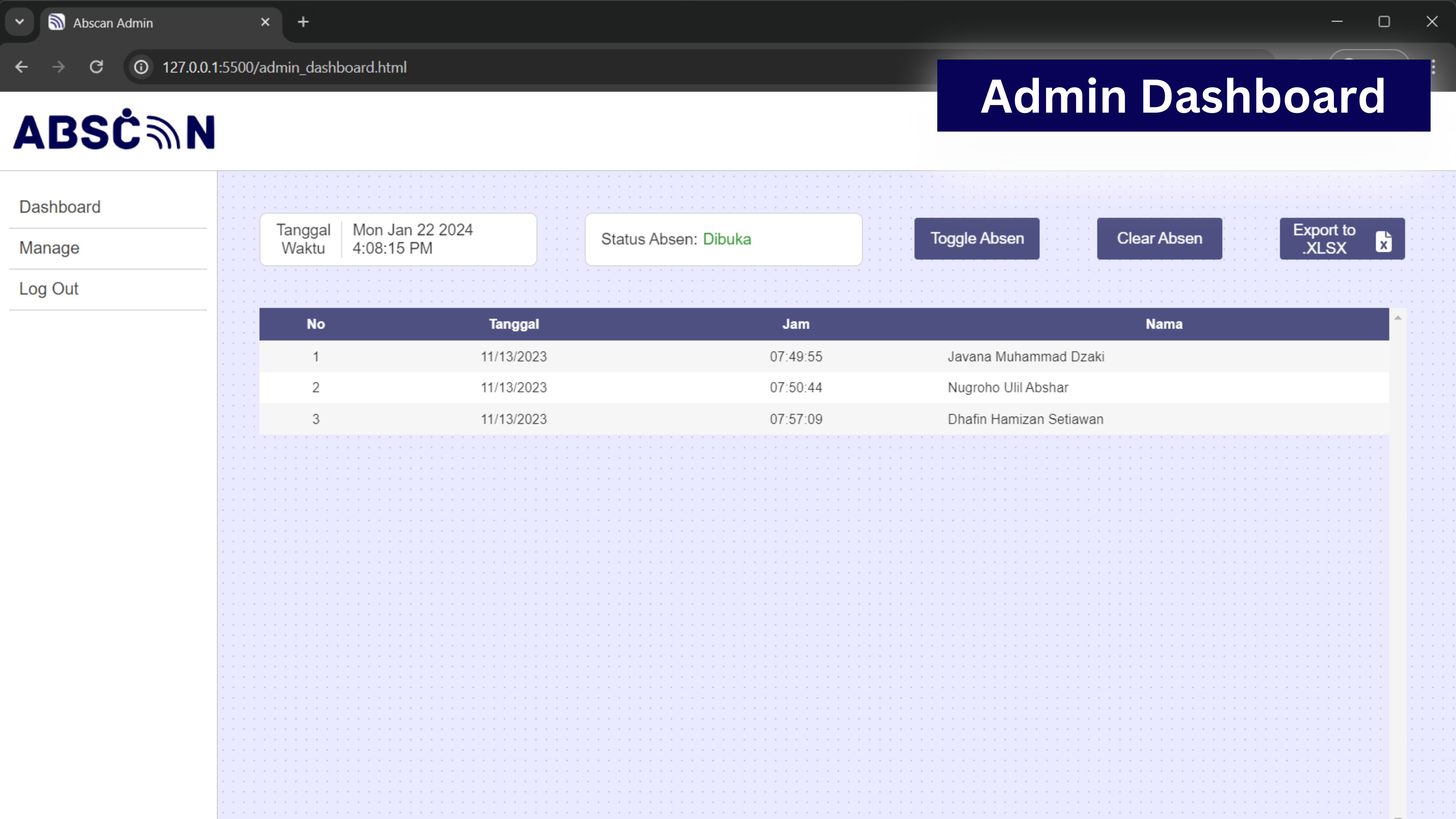
ABSCAN

Username

Password

Log in

Login Page



Admin Dashboard

Dashboard

Manage

Log Out

Tanggal Waktu
Mon Jan 22 2024
4:08:15 PM

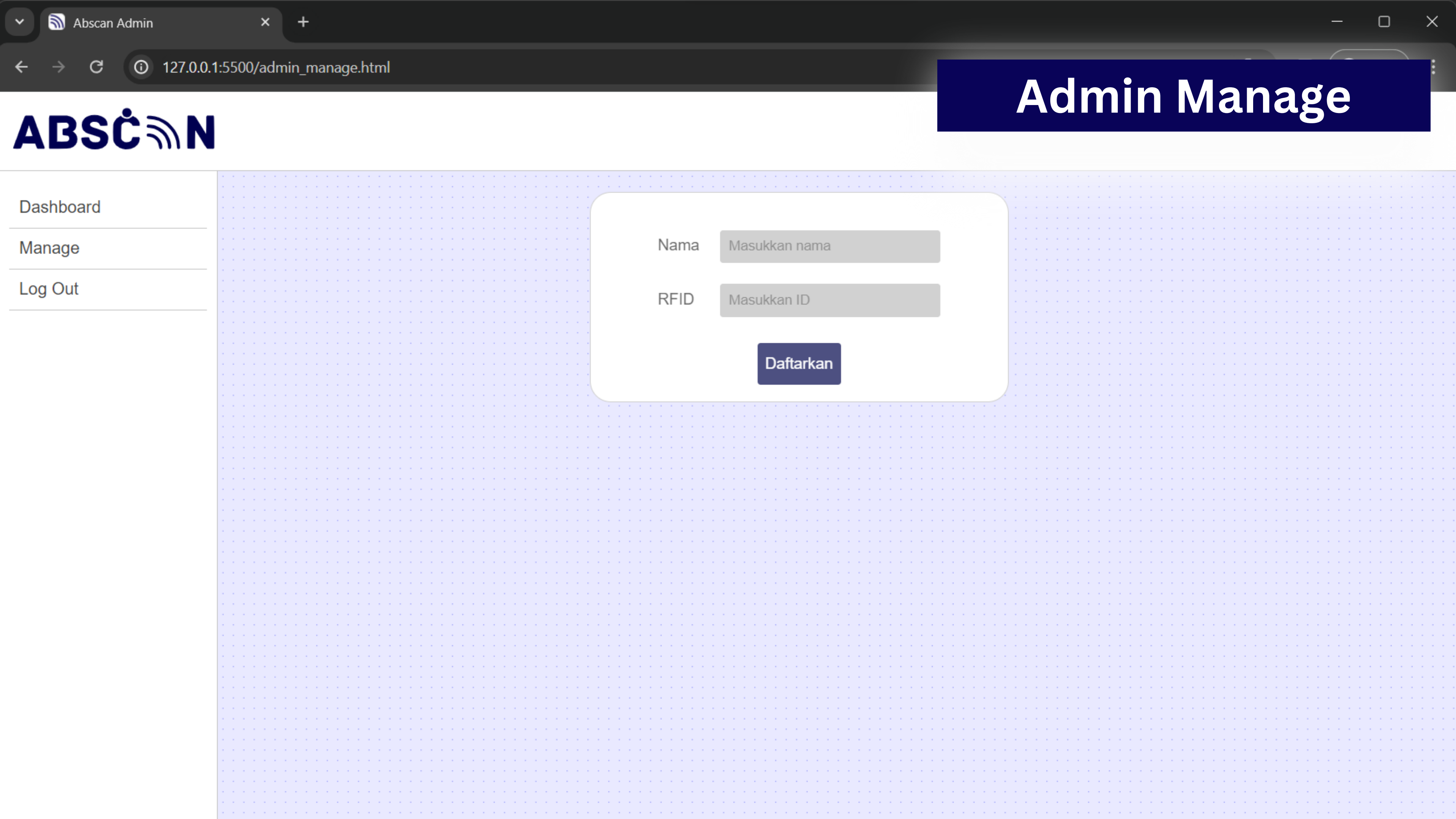
Status Absen: Dibuka

Toggle Absen

Clear Absen

Export to
.XLSX

No	Tanggal	Jam	Nama
1	11/13/2023	07:49:55	Javana Muhammad Dzaki
2	11/13/2023	07:50:44	Nugroho Ulil Abshar
3	11/13/2023	07:57:09	Dhafin Hamizan Setiawan



Admin Manage

Dashboard

Manage

Log Out

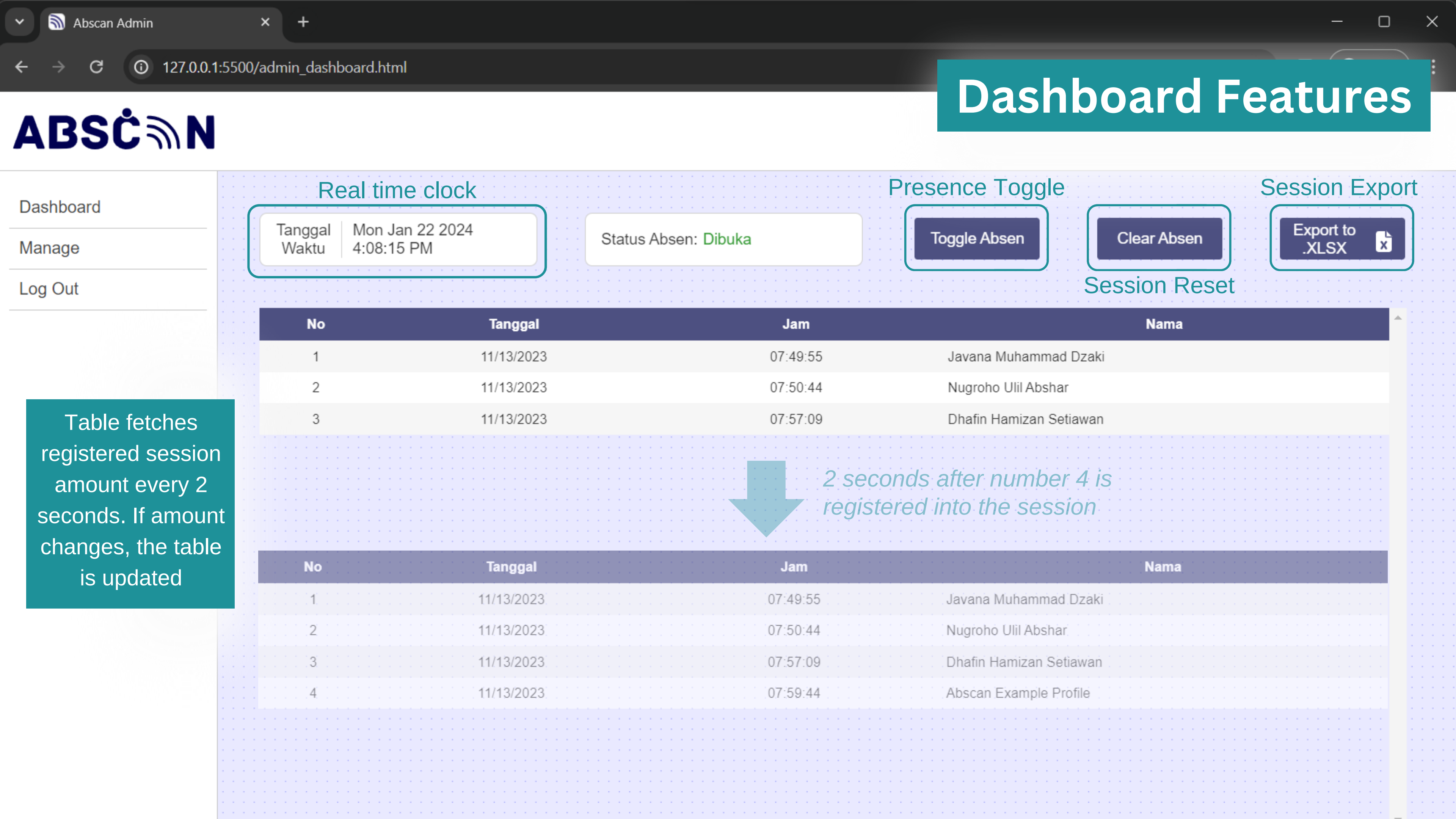
Nama

Masukkan nama

RFID

Masukkan ID

Daftarkan



Dashboard Features

Dashboard

Manage

Log Out

Real time clock

Tanggal Waktu

Mon Jan 22 2024
4:08:15 PM

Status Absen: Dibuka

Presence Toggle

Toggle Absen

Clear Absen

Session Reset

Session Export

Export to .XLSX

No	Tanggal	Jam	Nama
1	11/13/2023	07:49:55	Javana Muhammad Dzaki
2	11/13/2023	07:50:44	Nugroho Ulil Abshar
3	11/13/2023	07:57:09	Dhafin Hamizan Setiawan



2 seconds after number 4 is registered into the session

No	Tanggal	Jam	Nama
1	11/13/2023	07:49:55	Javana Muhammad Dzaki
2	11/13/2023	07:50:44	Nugroho Ulil Abshar
3	11/13/2023	07:57:09	Dhafin Hamizan Setiawan
4	11/13/2023	07:59:44	Abscan Example Profile

Table fetches registered session amount every 2 seconds. If amount changes, the table is updated

Presence Toggle

On page load, the current session status is immediately fetched with `getStatus`. The status can be changed with the toggle button, activating `postStatus`. This status will determine whether `presenceHandler` will accept or refuse incoming request.

sheet_dataprocess: process

USABLE STATUS CELLS	
STATUS ABSEN:	FALSE

USABLE STATUS CELLS	
STATUS ABSEN:	TRUE



webserver

Status Absen: **Ditutup**

Toggle Absen

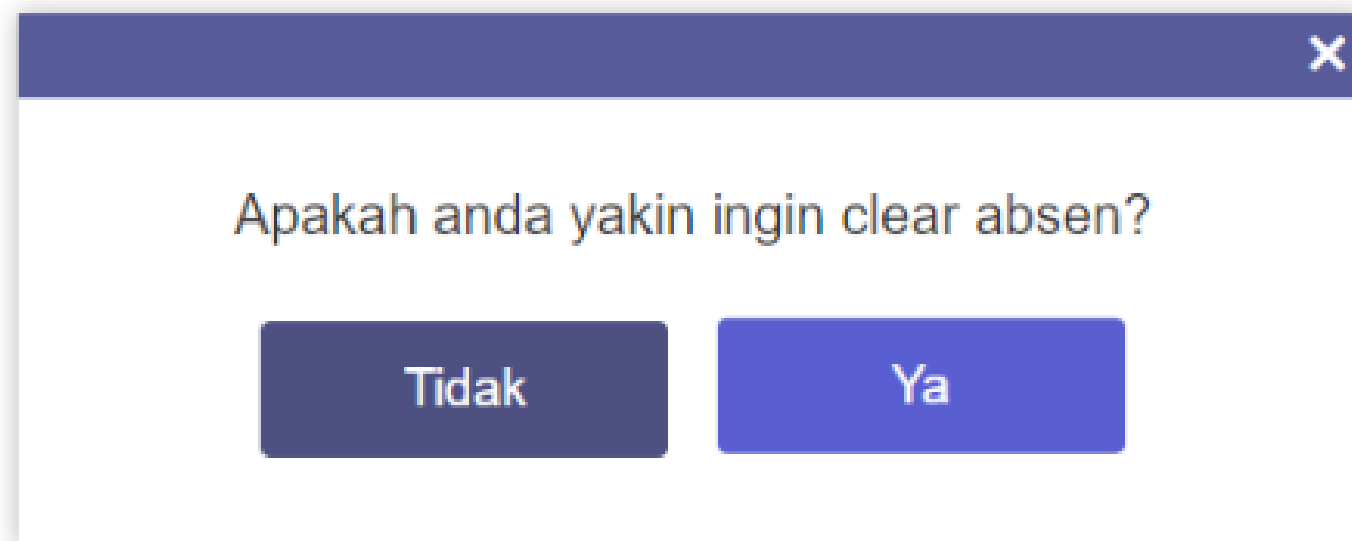
Status Absen: **Dibuka**

Toggle Absen

Session Reset

After clicking the "Reset Absen" button, a confirmation dialog will appear. If confirmed, the "doClear" function will be triggered, wiping any registered attendance for the current session.

confirmation dialog



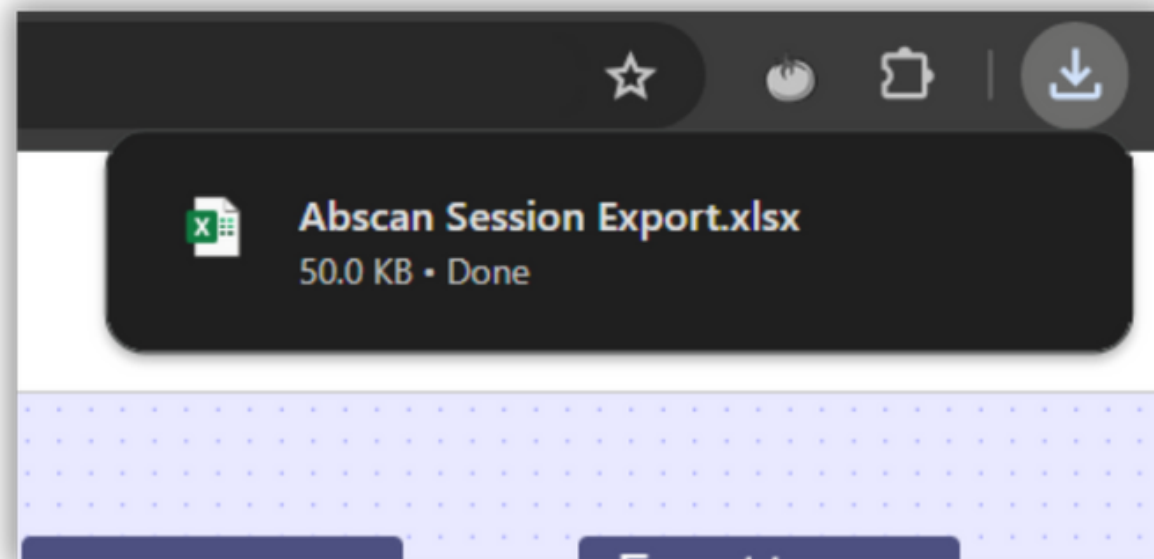
after dialog confirmed

No	Tanggal	Jam	Nama

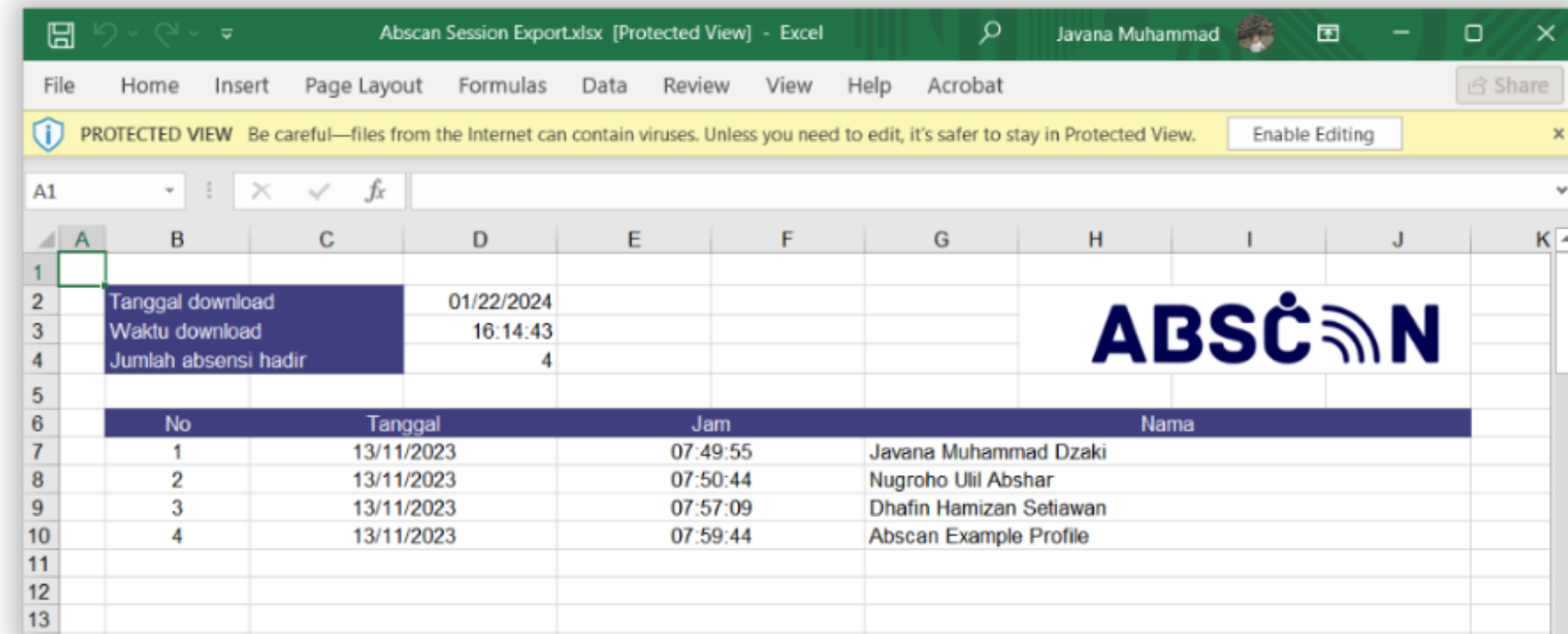
Session Export

Upon clicking "Export to .xlsx" button, export time, date, and registered user count of the session will be updated in sheet_session. The sheet is then be automatically downloaded in .xlsx format

auto download



exported session in .xlsx

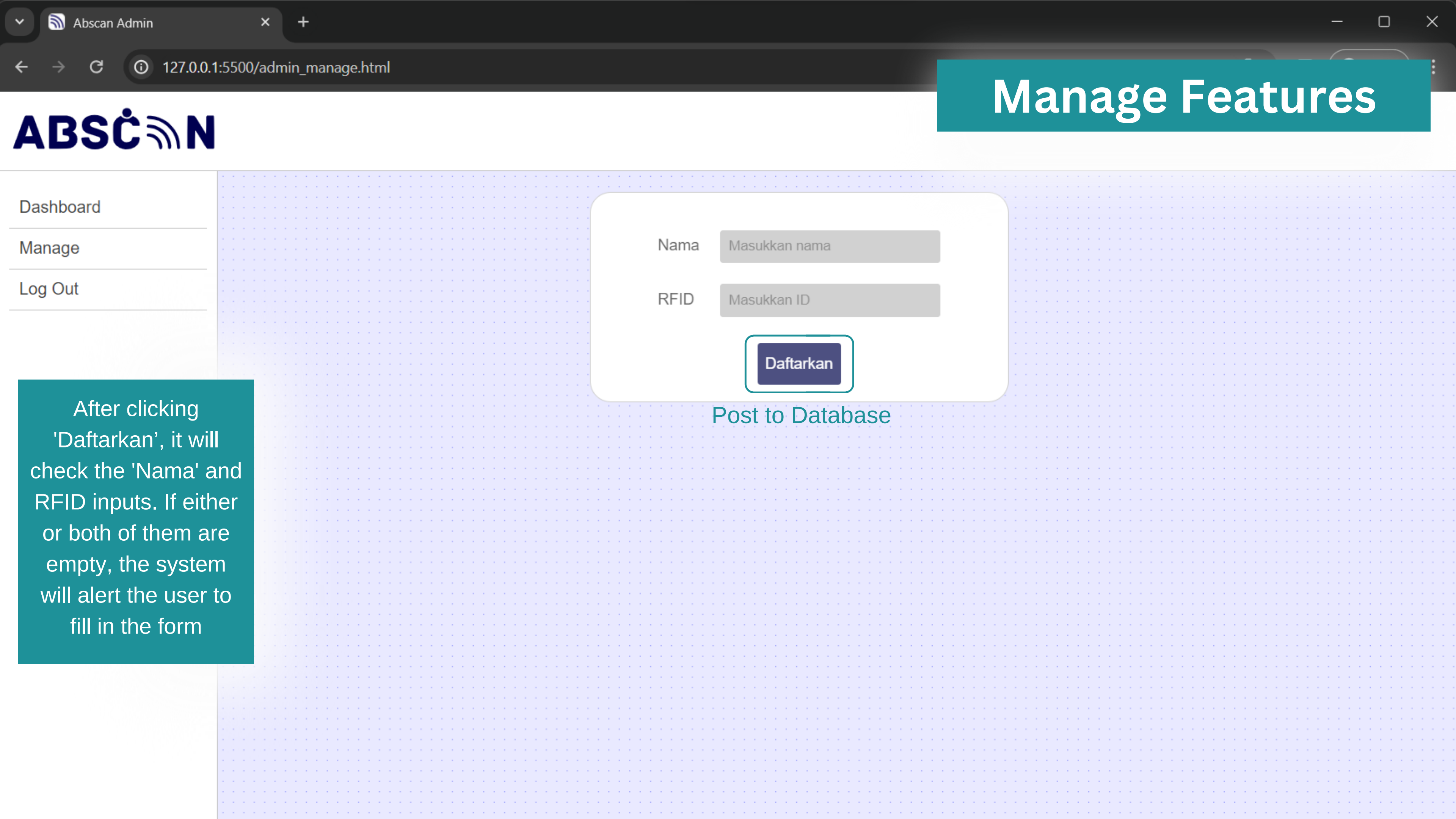


The screenshot shows an Excel spreadsheet in Protected View. The spreadsheet contains session export data with a header row and several data rows. The 'ABSCAN' logo is visible in the top right corner of the data area.

No	Tanggal	Jam	Nama
1	13/11/2023	07:49:55	Javana Muhammad Dzaki
2	13/11/2023	07:50:44	Nugroho Ulil Abshar
3	13/11/2023	07:57:09	Dhafin Hamizan Setiawan
4	13/11/2023	07:59:44	Abscan Example Profile

Summary data (from rows 2-4 of the spreadsheet):

Field	Value
Tanggal download	01/22/2024
Waktu download	16:14:43
Jumlah absensi hadir	4



Manage Features



Dashboard

Manage

Log Out

Nama

Masukkan nama

RFID

Masukkan ID

Daftarkan

Post to Database

After clicking 'Daftarkan', it will check the 'Nama' and RFID inputs. If either or both of them are empty, the system will alert the user to fill in the form

Post to Database

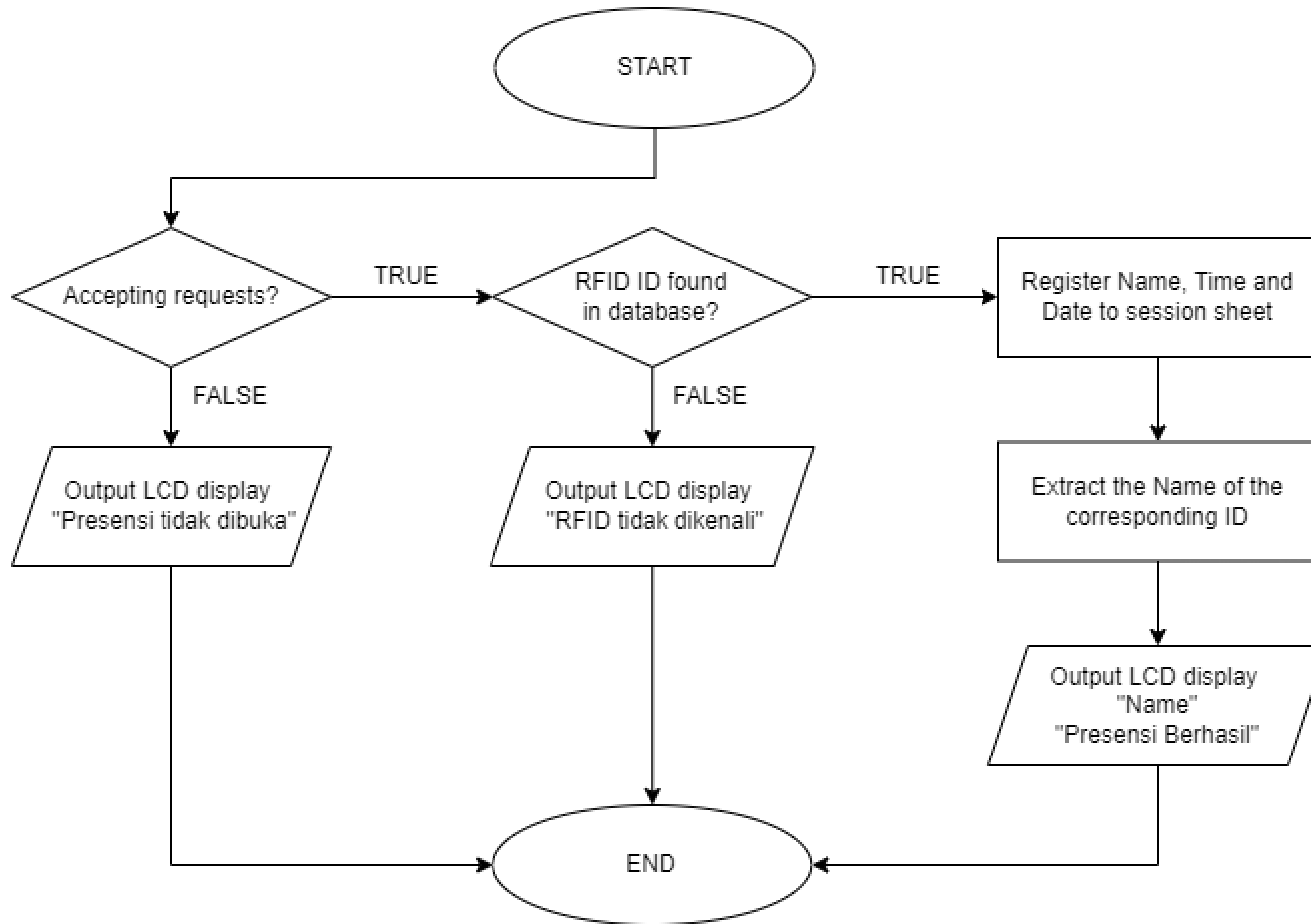
If the form has been filled, Name and RFID ID will be posted to database by postData. After this process, the RFID card can be used. The name of that RFID number will appear at Dashboard and LCD, if detected by the sensor

add new ID form

Nama	<input type="text" value="Abscan Profile Example"/>
RFID	<input type="text" value="8007CA803233"/>
<input type="button" value="Daftarkan"/>	

sheet_dataprocess: database

3	8007CA803235	Siapa Kan Ini Profile
4	9A3F8E2D471B	Nama Keren Banget
5	E65C1D9A0B7F	Javana Muhammad Dzaki
6	2B6F4C1E8A3D	Nugroho Ulil Abshar
7	D0A7B9F5C382	Sampel Contoh Orang
8	7E4D3F8A1C6B	Sebuah Profile Contoh
→ 9	8007CA803233	Abscan Profile Example



What happens on card scan?

(simplified)

Thank You