

Sprint 1 review

Electrical consumption meter visualization

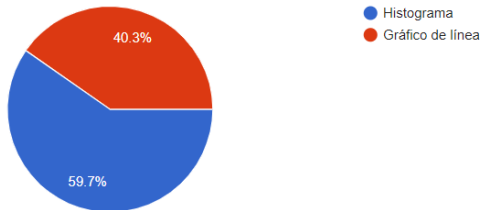
01/10/2020

Online survey

Type of chart

¿Qué tipo de gráfica preferiría para visualizar el consumo eléctrico?

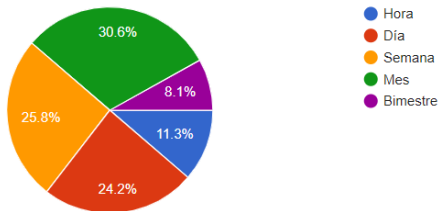
62 responses



Time frame

¿Qué periodo de tiempo le gustaría visualizar? En base al periodo de tiempo para hacer la visualización de los datos de consumo, ¿Cómo te gustaría definirlo? Por...

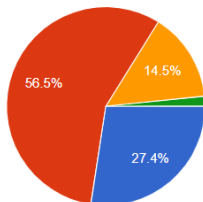
62 responses



Device breakdown

¿Cómo le gustaría agrupar los dispositivos para visualizar su consumo? Y, ¿Cómo te gustaría visualizar los dispositivos?

62 responses

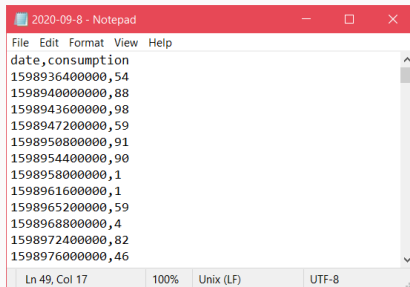


- Sin agrupar, me gustaría ver el consumo de los dispositivos individualmente
- Por tipo de dispositivo (Ejemplo: focos, lamparas, televisiones, etcetera)
- Por habitación de mi casa
- De mayor a menor consumo

Simulated data

Simulated data server

- Node.js and @dunebird/dune npm package
- Generates data for a certain month and stores it in a CSV file
- The simulated consumption for each device is stored by the hour

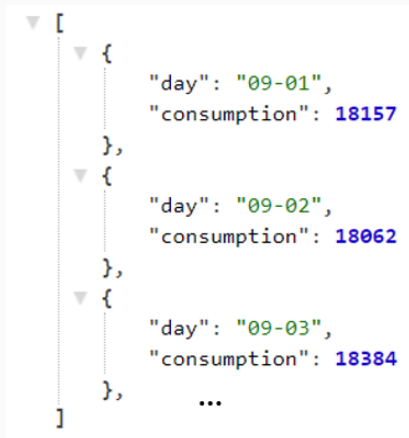


A screenshot of a Notepad window titled "2020-09-8 - Notepad". The window displays a CSV file with two columns: "date" and "consumption". The data consists of 12 rows, each representing an hour in September 2020. The consumption values are integers ranging from 1 to 98. The status bar at the bottom indicates the cursor is at line 49, column 17, with a zoom level of 100%, encoding of Unix (LF), and a character set of UTF-8.

date	consumption
1598936400000	54
1598940000000	88
1598943600000	98
1598947200000	59
1598950800000	91
1598954400000	90
1598958000000	1
1598961600000	1
1598965200000	59
1598968800000	4
1598972400000	82
1598976000000	46

Data grouping

- The server contains routes to group the data by a certain time frame
- At the moment, the data can only be grouped by month



```
[
  {
    "day": "09-01",
    "consumption": 18157
  },
  {
    "day": "09-02",
    "consumption": 18062
  },
  {
    "day": "09-03",
    "consumption": 18384
  },
  ...
]
```


Chart development

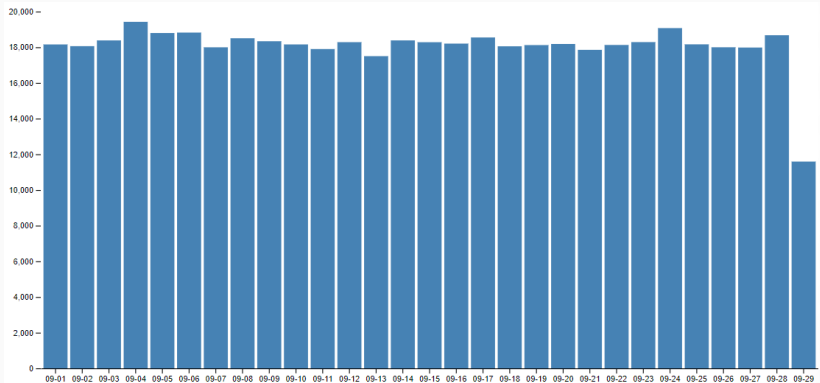
D3 library

- The D3 library was used to develop a bar chart using the grouped data



Chart result

- The X axis represents the days of the month
- The electrical consumption is measured in the Y axis



Time frame selection

- A date picker was added to select the desired month to visualize

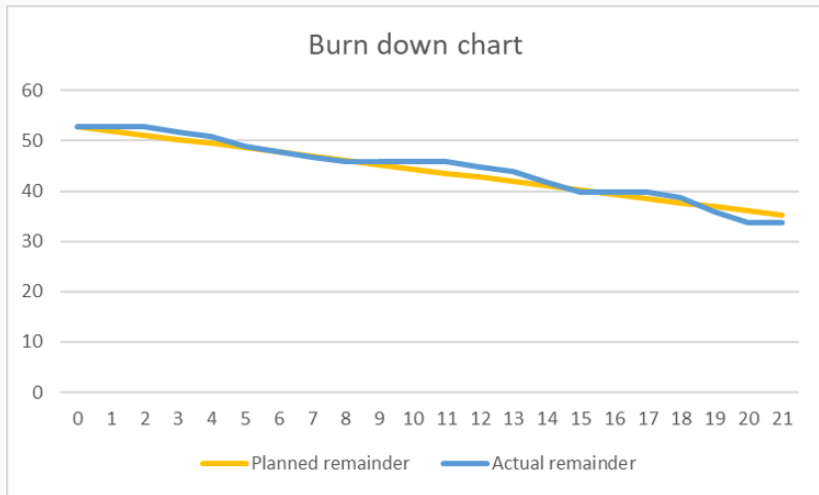


Documentation

- The project repository is available at <https://github.com/DanielaAlvarado/electrical-consumption-meter>

Project follow up

- The burn down chart and a link to the Scrum board are included in the repository

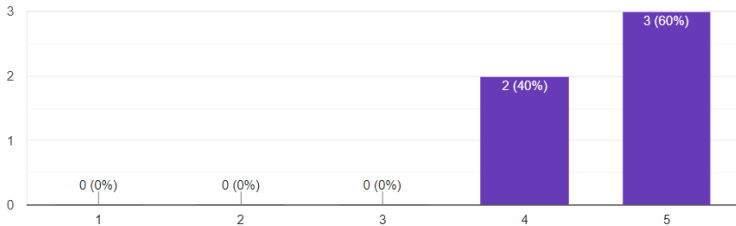


- The following manuals are included in the repository
 - User manual
 - Technical manual
 - Installation manual

Testing

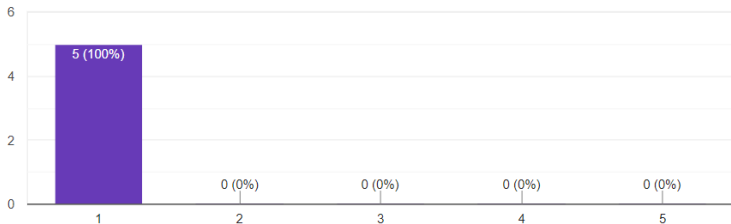
I think that I would like to use this system frequently.

5 responses



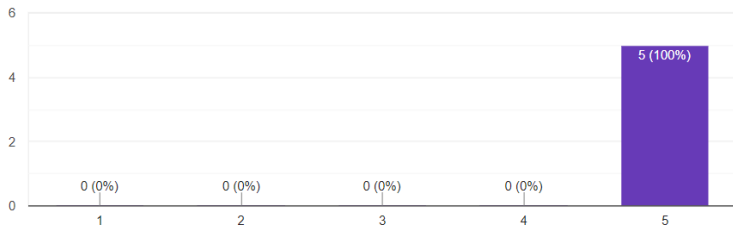
I found the system unnecessarily complex.

5 responses



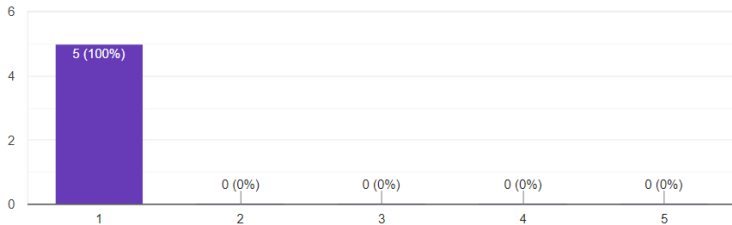
I thought the system was easy to use.

5 responses



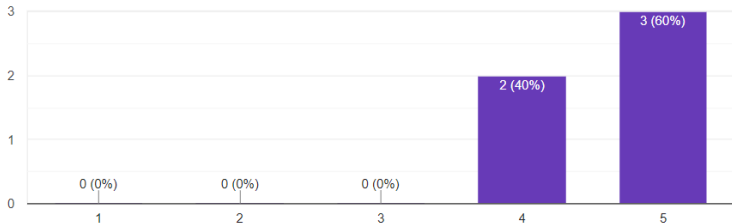
I think that I would need the support of a technical person to be able to use this system.

5 responses



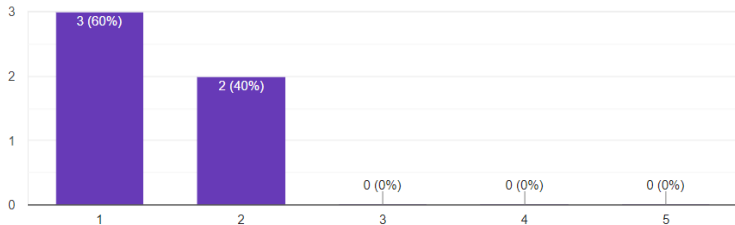
I found the various functions in this system were well integrated.

5 responses



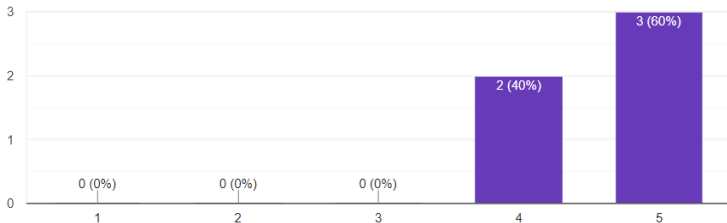
I thought there was too much inconsistency in this system.

5 responses



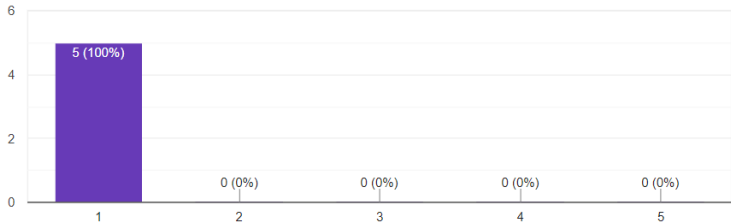
I would imagine that most people would learn to use this system very quickly.

5 responses



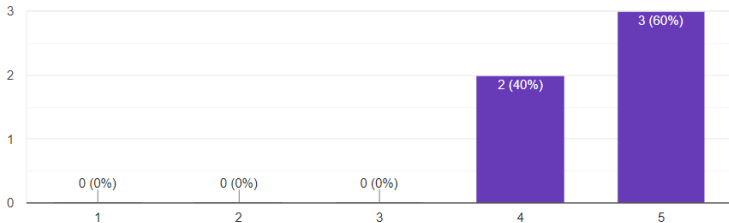
I found the system very cumbersome to use.

5 responses



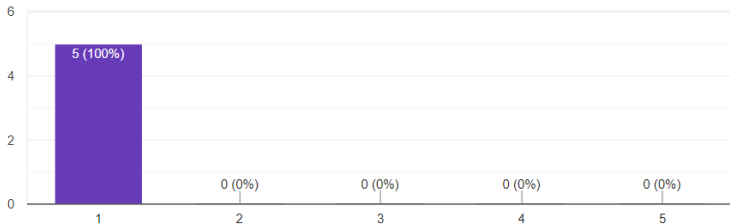
I felt very confident using the system.

5 responses



I needed to learn a lot of things before I could get going with this system.

5 responses



- The following functionalities will now be demonstrated
 - As a user, I want to visualize my electrical consumption in a specific time frame in a chart so that I can get a better overview of it
 - As a user, I want to modify the time frame that is displayed in the chart, so that I can see with more detail a specific period of time of my interest