Remote IoT Control

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1. **OBJECTIVE**

To control devices using IoT

2. **REQUIREMENTS**

- Computer.

- Arduino Circuit

- Data transfer cable

3. **STEP BY STEP**

1. **Connect a device and assign functions.**

1.1. Open the website https://iot-control-convex.vercel.app/ and click "Create an account". (fig.1).
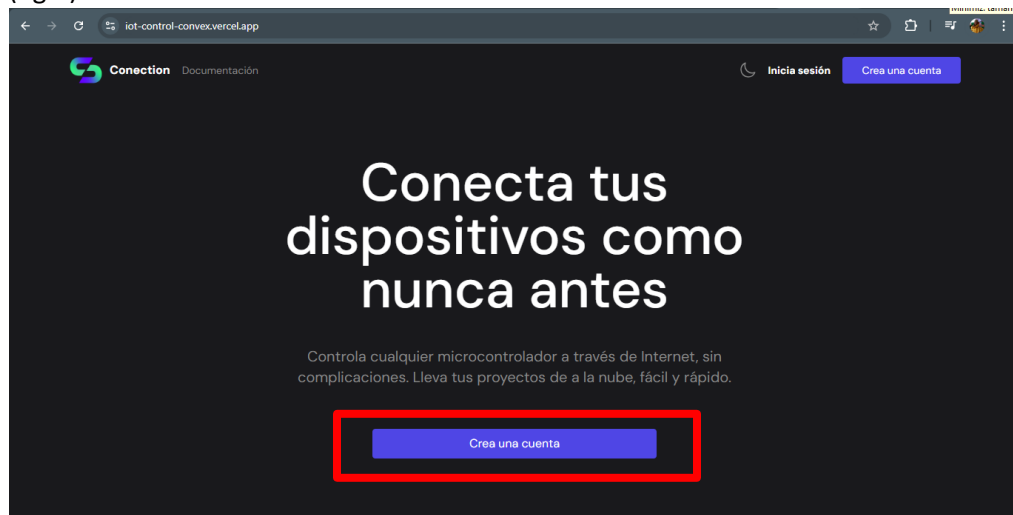

Fig. 1. Connection website

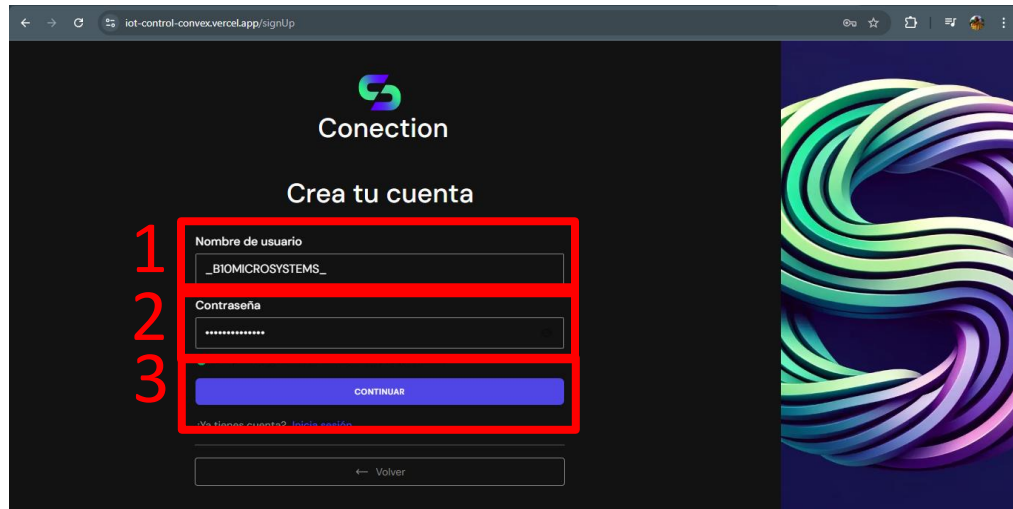1.2. Create your username and password. Then click "Start". (fig.2).

Fig. 2. Create an account in the Connection website

1.3. Assign a name and a description of the device to it. (fig. 3).

Fig. 3. Join a device to the Connection website

1.4. Add a new device (fig.4) and accredit it with a name, that tells you which device you are working with, and a description, which specifies the work of it. (fig.5). Make sure your device is kicking in as Admin, if it is not click on "usuario" and change it.
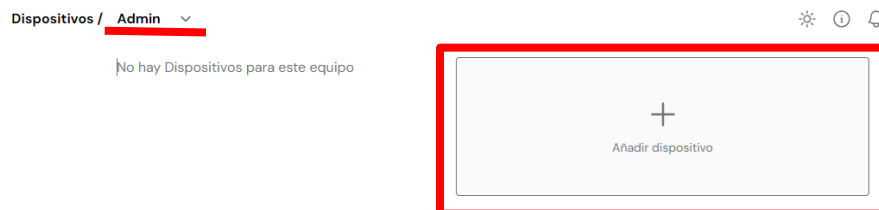

Fig. 4. Create a device

Arduino

circuit with a Led

Fig. 5. Assing a name to the device

1.5. Click "Add new function" (fig. 6). Give it a name and a description. (fig.7).

Funciones del dispositivo

Oprime el botón para crear una nueva función de tu dispositivo

+ Añadir nueva funcion

Cancelar   Crear Dispositivo

Fig. 6. Create a new function

Funciones del dispositivo

Oprime el botón para crear una nueva función de tu dispositivo

Turn on

Información general

Power up the led.

Tipo de función   ⌄

Datos de Salida

¿Esta funcion envia datos al usuario?   ☐ Si   ■ No

¿Deseas enviar los datos en tiempo real?   ☐ Si   ■ No

Cancelar   Guardar Funcion

Fig. 7. Assing function description

1.6. In "Tipo de función" select "Por comandos". (fig.8). Then set the run command according to the code and choose whether it will be a numeric or text command. Finally, save the function. (fig.9). Establish more tasks if it is required.

Funciones del dispositivo

Oprime el botón para crear una nueva función de tu dispositivo

Turn on

Información general

Power up the led.

Tipo de función   ⌄

Por comandos

Libre

¿Esta funcion envia datos al usuario?   ☐ Si   ■ No

¿Deseas enviar los datos en tiempo real?   ☐ Si   ■ No

Fig. 8. Assing function parameters

Funciones del dispositivo

Oprime el botón para crear una nueva función de tu dispositivo

1 **Datos de entrada**

A

¿Deseas bloquear otras funciones al ejecutar esta función?   ☐ Si   ■ No

Numerica   ⌄

2 Numerica

Texto

Datos de Salida

3

Cancelar   Guardar Funcion

Fig. 9. Save the function

1.7. Click "Crear dispositivo" to save the device you created. (fig.10)

Dispositivos /   **Admin**   ⌄   ☀   ⓘ   🔔

Arduino

Circuit with a led

Funciones del dispositivo

Oprime el botón para crear una nueva función de tu dispositivo

Turn on   🖉

+ Añadir nueva funcion

Cancelar   Crear Dispositivo

Fig. 10. Save the circuit

1.8. With the Data transfer cable connect the circuit (fig. 11) and upload the serial code. (fig. 12)
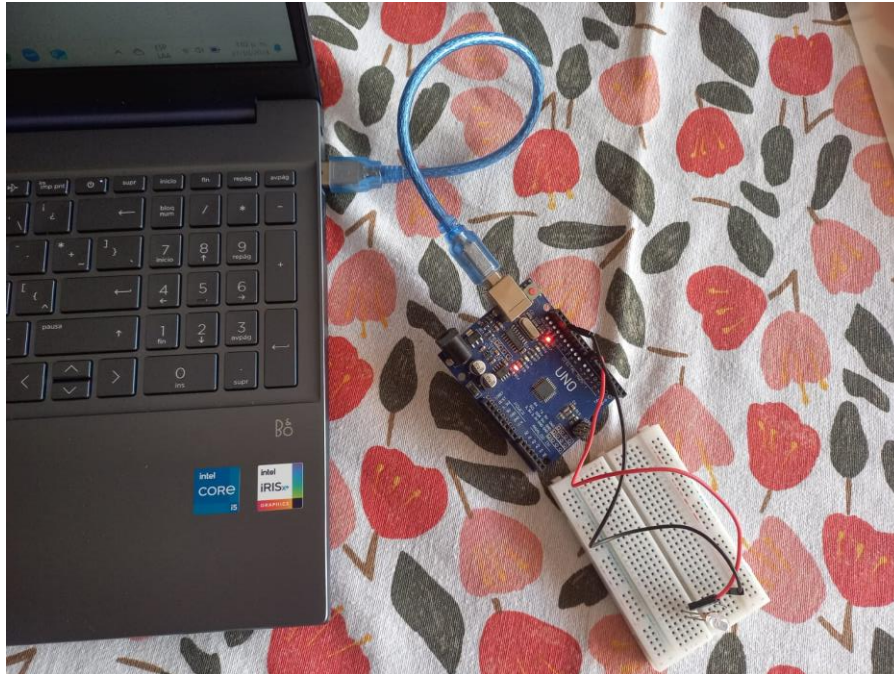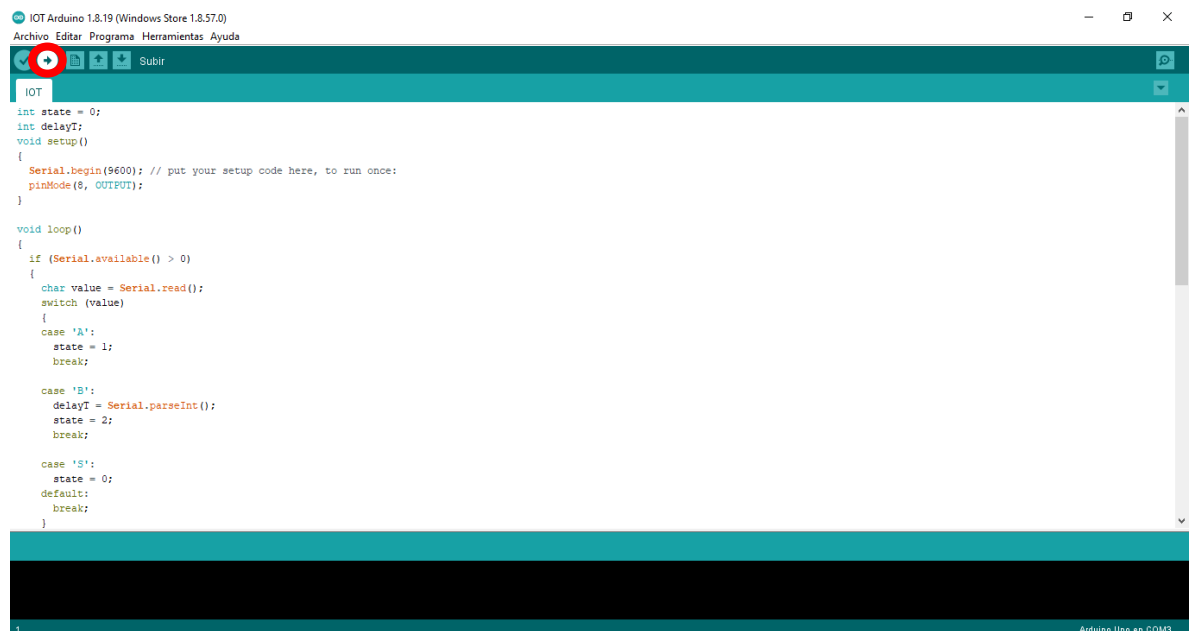
Fig. 11. Arduino connects to the computer.

Fig. 12. Arduino software.

1.9. click on "Conectar" and select the serial port (USB) where your circuit is connected. (fig. 13)
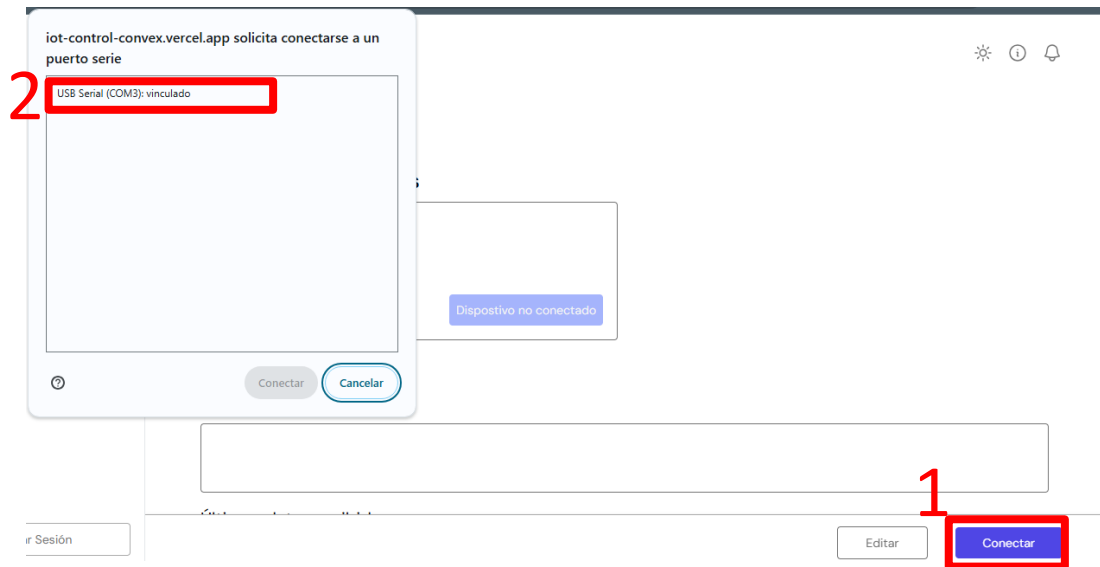
Fig. 13. Serial ports

1.10. If you want to carry out the function, choose the button "Ejecutar localmente" and ensure that it is working looking what appears in the command console. (fig.14)

Fig. 14. Local taste of the circuit

2. **Operate the circuit from another device.**

2.1. In the device where you have connected the circuit stand in Members space and click in "Añadir nuevo integrante". (fig. 15)
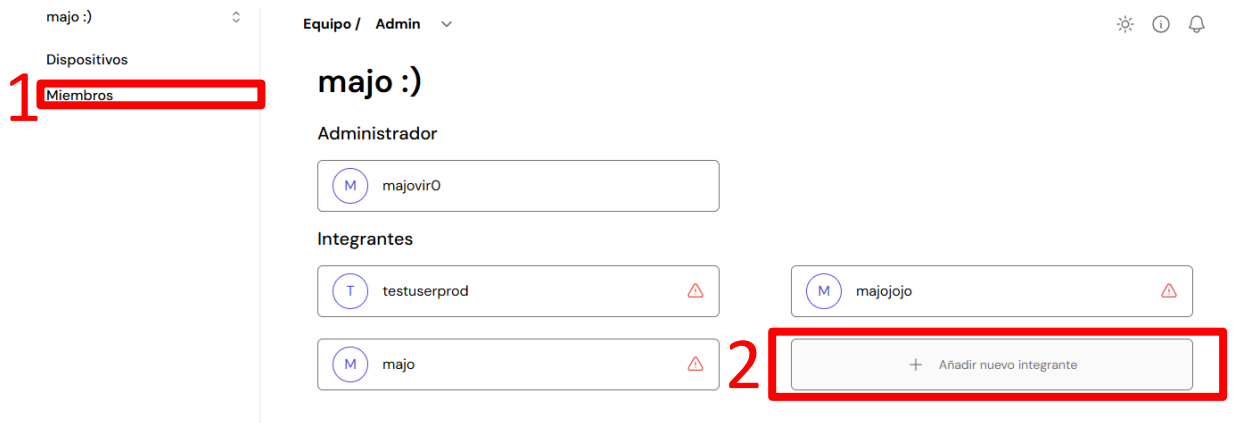
Fig. 15. Connect with another user

2.2. Then write the username of the other person and send the invitation. (fig. 16)
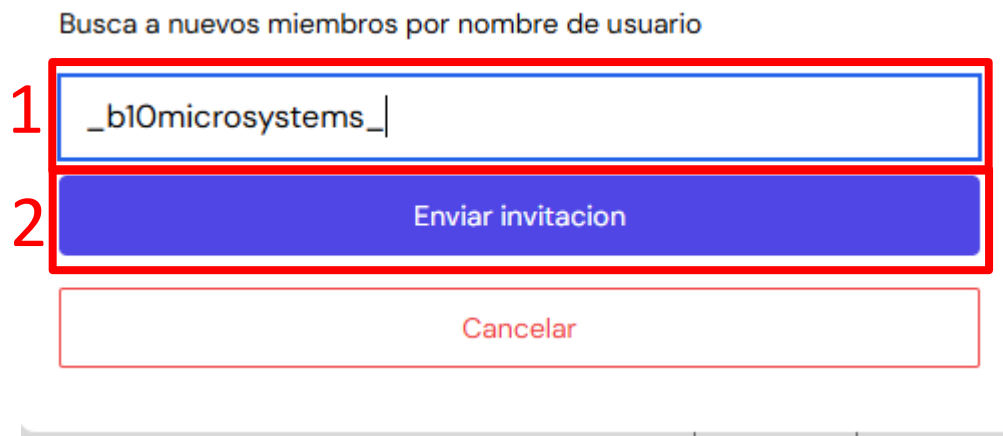

Fig. 16. Send an invitation to another user

2.3. Now, in the other device, login the account to which the invitation was sent and click in the bell icon in the top corner (fig. 17). There will appear a message with the invitation, accept it pressing the green button (fig. 18). <u>Make sure your device is kicking in as Usuario, if it is not click in "Admin" and change it.</u>
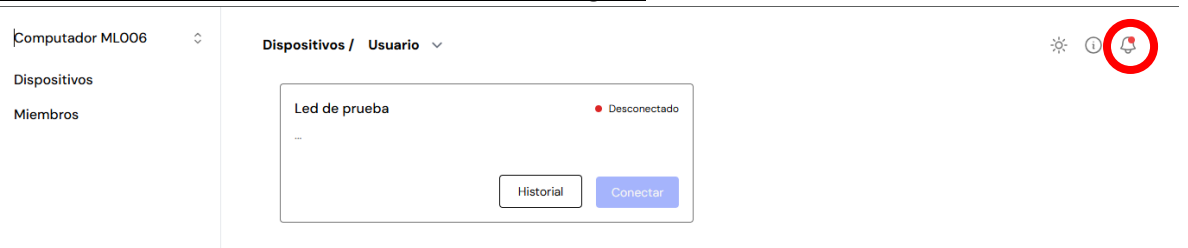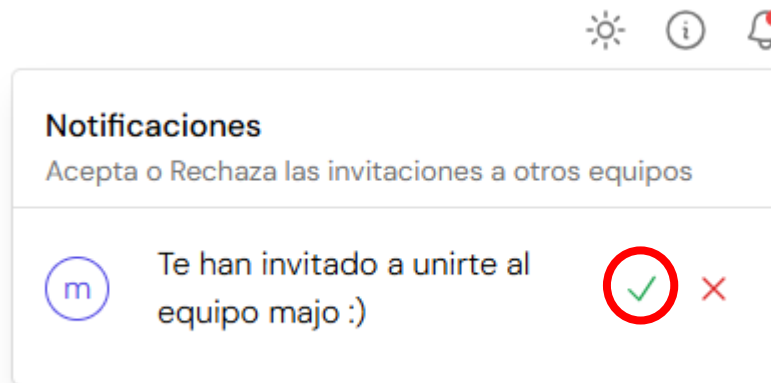

Fig. 17. Receive a notification

Fig. 18. Accept an invitation

2.4. Tap the device name and substitute it to the device you want to control. (fig.19) In this way it will appear al the circuits connect in the other device. (fig.20)
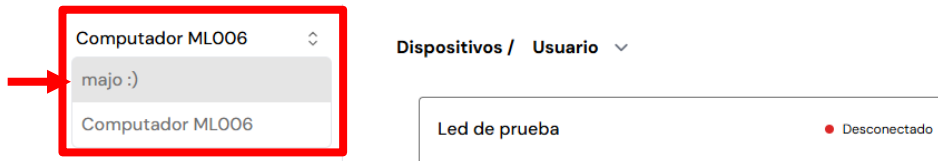

Fig. 19. Change the device

Fig. 20. Possible circuits

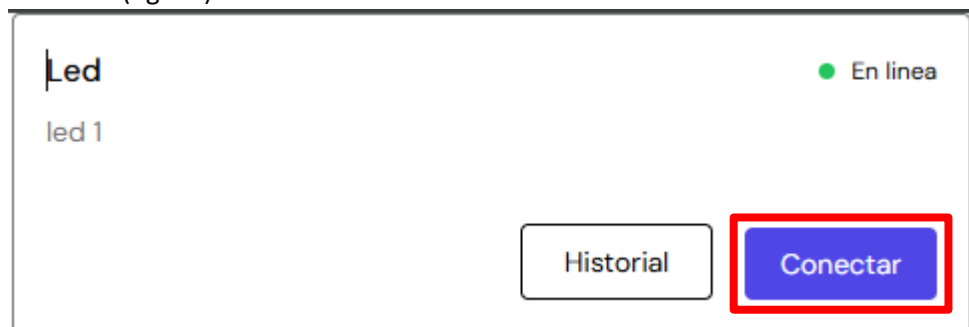2.5. Press in "Conectar" (fig. 21) and "Ejecutar" to interact with the device functions at a distance. (fig. 22)

Fig. 21. Connect to a distance circuit

● conectado, verificado hace 6 minutos

Led

led 1

Funciones del dispositivo

Prender

Encender el led

Ejecutar

Apagar

Apagar led

Ejecutar

No se :)

Función para cambiar parámetros…

Ejecutar

Fig. 22. Carry out different functions at the distance