Instituto Tecnológico y de Estudios Superiores de Monterrey

Campus Monterrey

Escuela de Ingeniería y Ciencias

Entregable Final.

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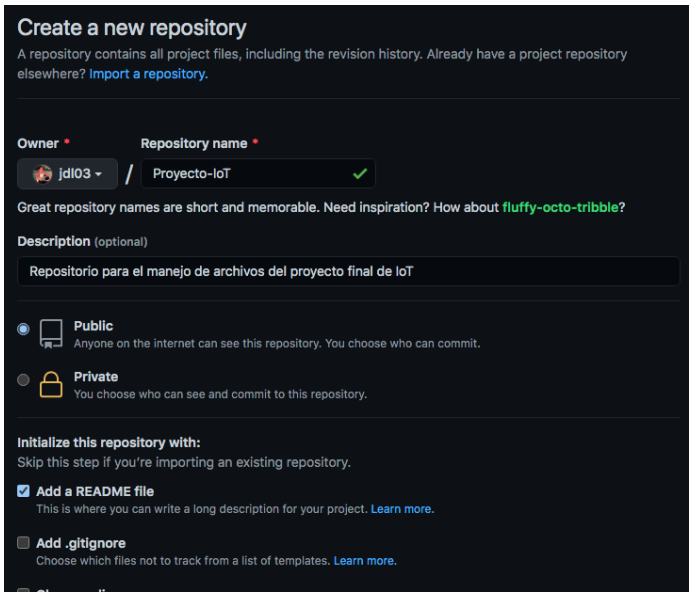
Profesor Luis Ricardo Salgado Garza

Fecha
19/Marzo/2021

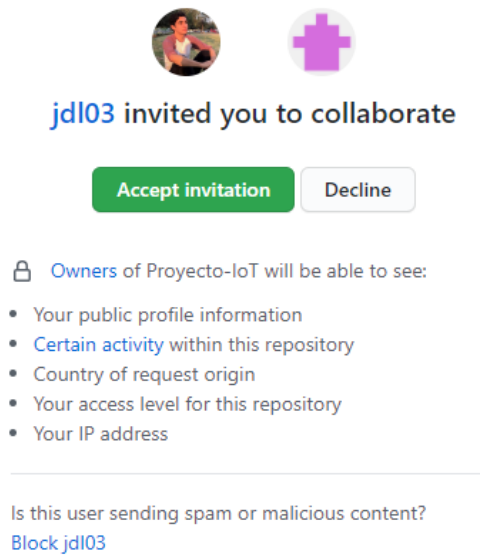
Índice

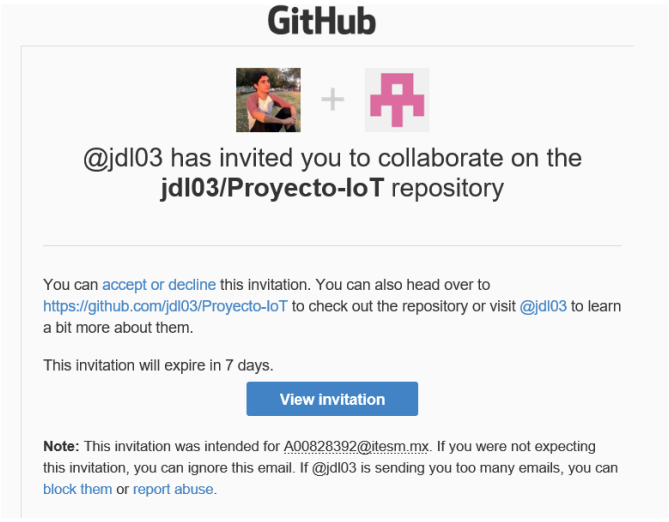
Creación de Repositorio

1. Creación de un repositorio

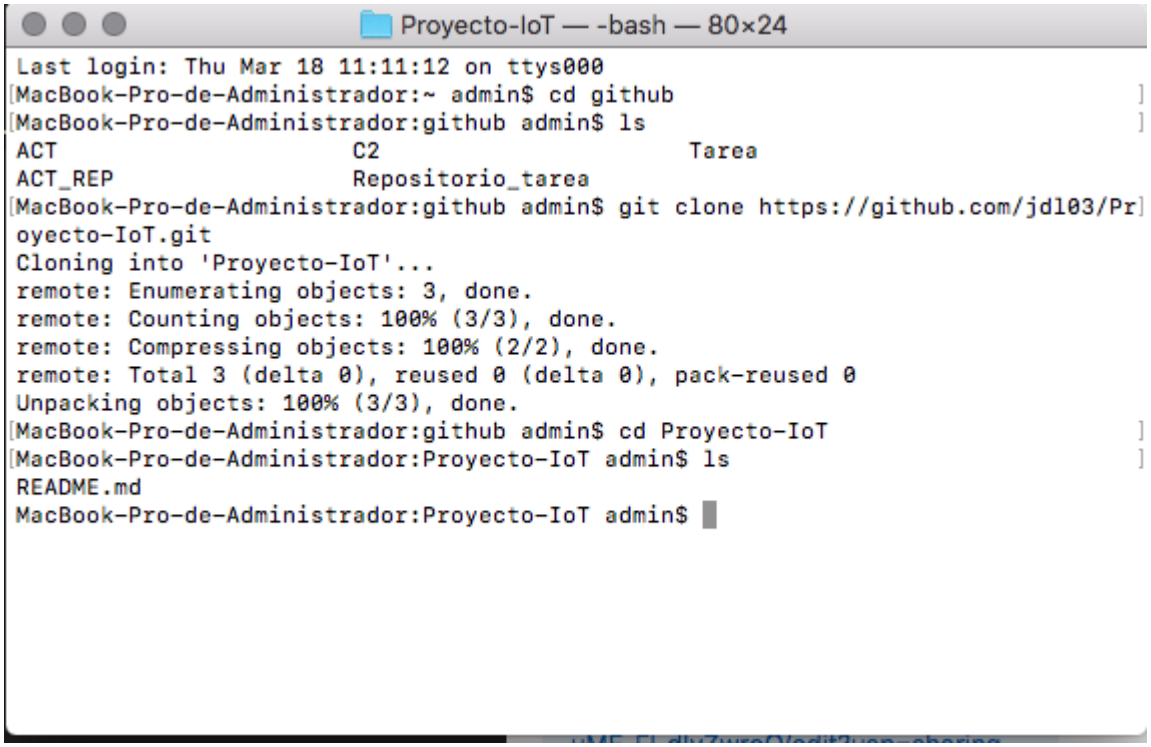


2. Invitaciones al Repositorio

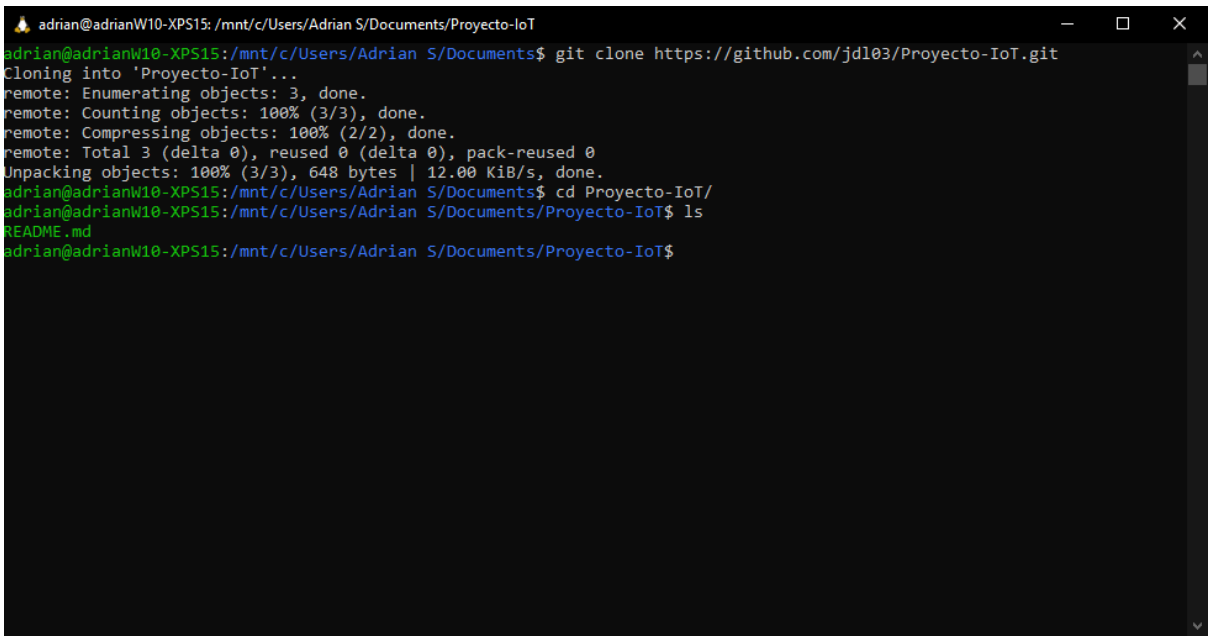


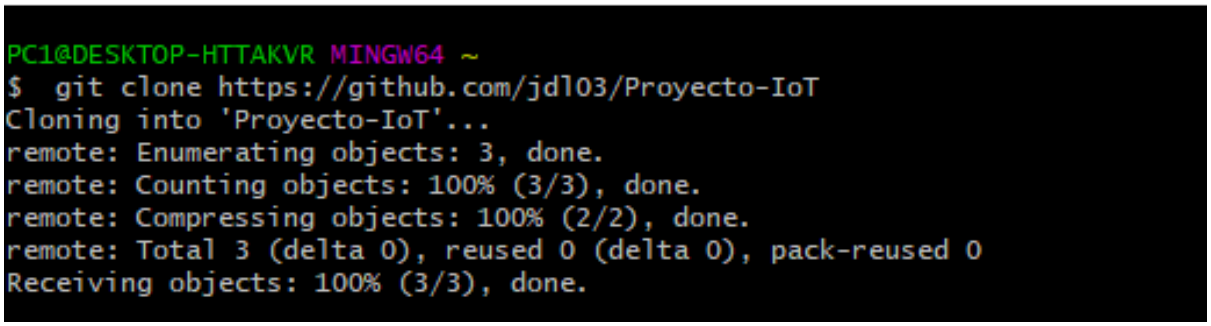


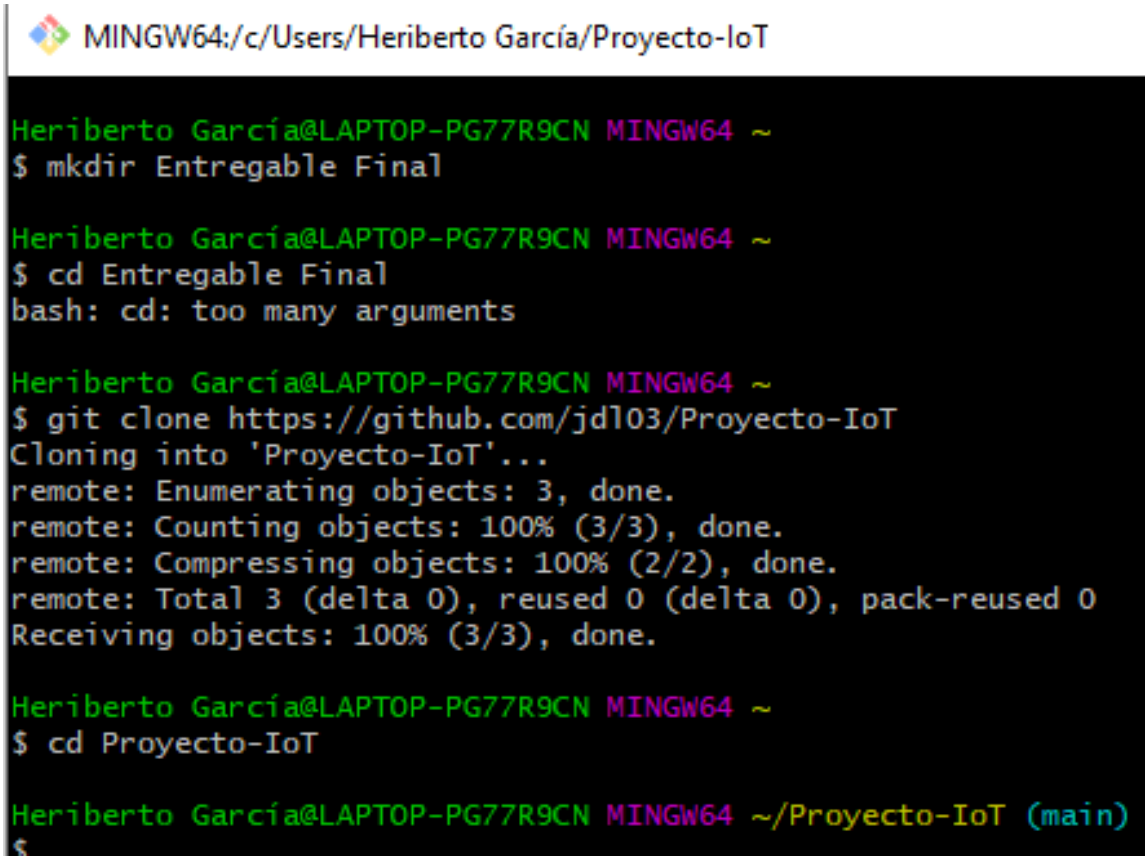
3. Clonaciones por parte de los integrantes del Equipo



```
BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github
$ git clone https://github.com/jd103/Proyecto-IoT.git
Cloning into 'Proyecto-IoT'...
remote: Repository not found.
fatal: repository 'https://github.com/jd103/Proyecto-IoT.git/' not found

BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github
$ git clone https://github.com/jdl03/Proyecto-IoT.git
Cloning into 'Proyecto-IoT'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.

BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github
$ ls
C1/  C2/  C3/  C4/  Proyecto-IoT/  prueba.txt

BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github
$ cd Proyecto-IoT

BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github/Proyecto-IoT (main)
$
```


adrian@adrianW10-XPS15: /mnt/c/Users/Adrian S/Documents/Proyecto-IoT
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents$ git clone https://github.com/jdl03/Proyecto-IoT.git
Cloning into 'Proyecto-IoT'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 648 bytes | 12.00 KiB/s, done.
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents$ cd Proyecto-IoT/
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents/Proyecto-IoT$ ls
README.md
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents/Proyecto-IoT$


PC1@DESKTOP-HTTAKVR MINGW64 ~
$ git clone https://github.com/jdl03/Proyecto-IoT
Cloning into 'Proyecto-IoT'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.


MINGW64:/c/Users/Heriberto García/Proyecto-IoT
Heriberto García@LAPTOP-PG77R9CN MINGW64 ~
$ mkdir Entregable Final
Heriberto García@LAPTOP-PG77R9CN MINGW64 ~
$ cd Entregable Final
bash: cd: too many arguments
Heriberto García@LAPTOP-PG77R9CN MINGW64 ~
$ git clone https://github.com/jdl03/Proyecto-IoT
Cloning into 'Proyecto-IoT'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
Heriberto García@LAPTOP-PG77R9CN MINGW64 ~
$ cd Proyecto-IoT
Heriberto García@LAPTOP-PG77R9CN MINGW64 ~/Proyecto-IoT (main)
$

Introducción

Durante este proyecto, se seleccionará una problemática y se buscará crear un sistema que solucione dicho problema. A lo largo del curso, se trabajó con herramientas tecnológicas que se utilizarán para resolver la problemática seleccionada. El objetivo del proyecto final es que mediante estas herramientas, se pueda solucionar un problema social, aprovechando el uso de la tecnología impartida durante esta Semana Tec.

Descripción del problema

Como principal problemática, se eligió combatir la situación de los incendios forestales en México. En estos últimos días, se han registrado más de 100 incendios en nuestro país, causando graves consecuencias como la contaminación del aire, deforestación, y viviendas afectadas. Se buscará crear un sistema o dispositivo que detecte los incendios antes de que se expandan para dar más oportunidad al personal encargado de apagar los incendios. De esta manera, se buscará disminuir las consecuencias creadas por este desastre natural que se ha venido dando con frecuencia por el clima tan seco en nuestro país.

Herramientas utilizadas

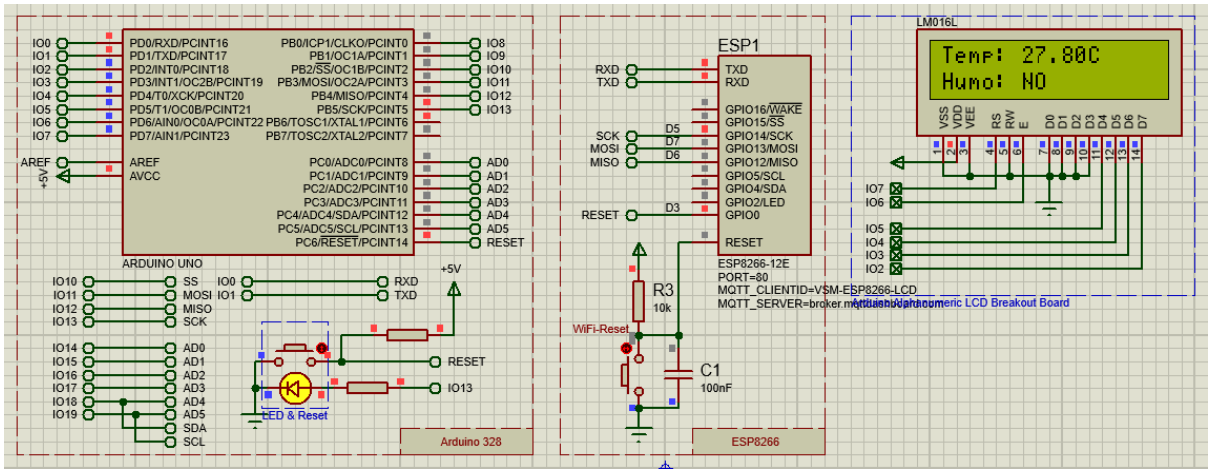
Las herramientas que se utilizarán para este proyecto serán: Proteus, Git, Github, donde Proteus será para la simulación de los sensores a usar para la detención de los incendios forestales en México, con Github se creará un repositorio para que cada quien con su Git suba su parte del trabajo para solucionar este problema mediante el IoT.

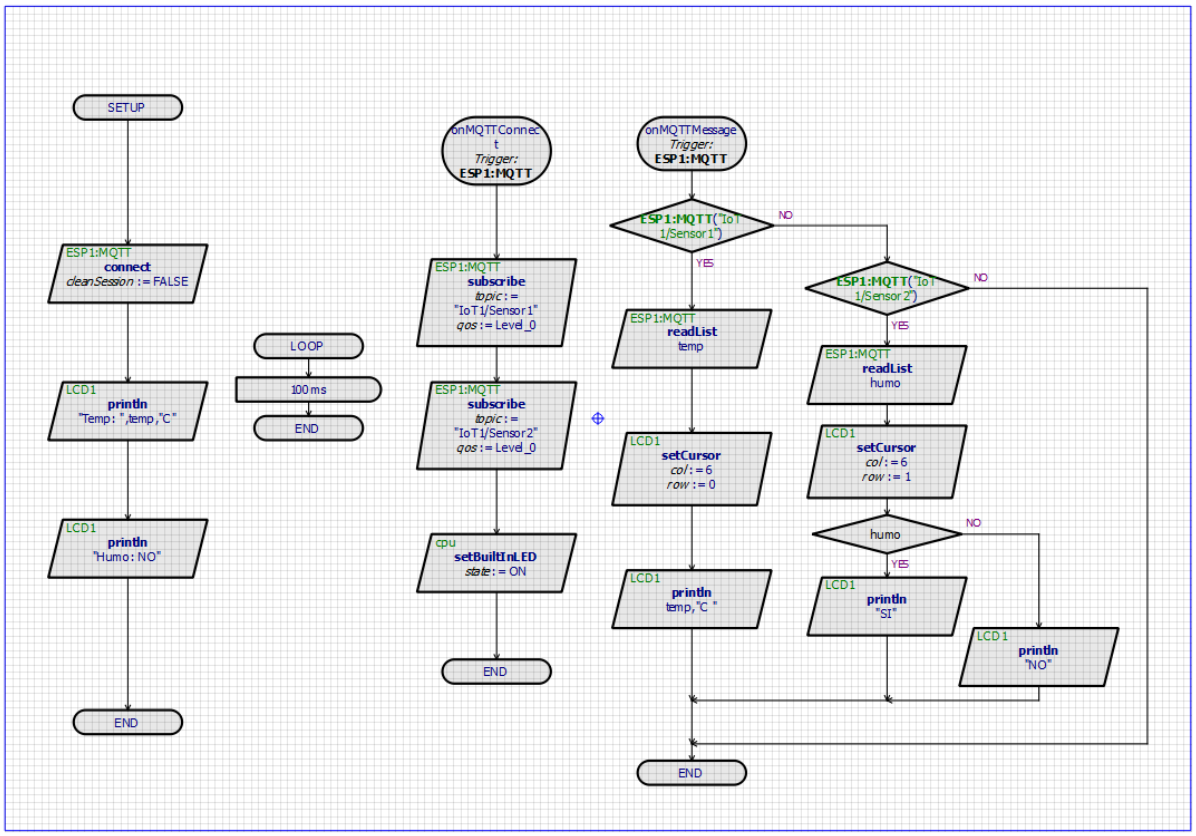
Solución propuesta

Para resolver este problema, se propuso la detección de un incendio próximo a través de dos mediciones, la temperatura ambiental y la presencia de humo. Estas se realizarán en un dispositivo IoT por medio de dos sensores (DHT22 y MQ2 respectivamente), y se enviarán por medio del protocolo MQTT. Posteriormente, se propone tener otro dispositivo IoT con una pantalla tipo LCD que esté suscrito por MQTT para recibir las lecturas realizadas. Asimismo, para conectar estos dispositivos se propone utilizar la red móvil 4G por su amplia cobertura.

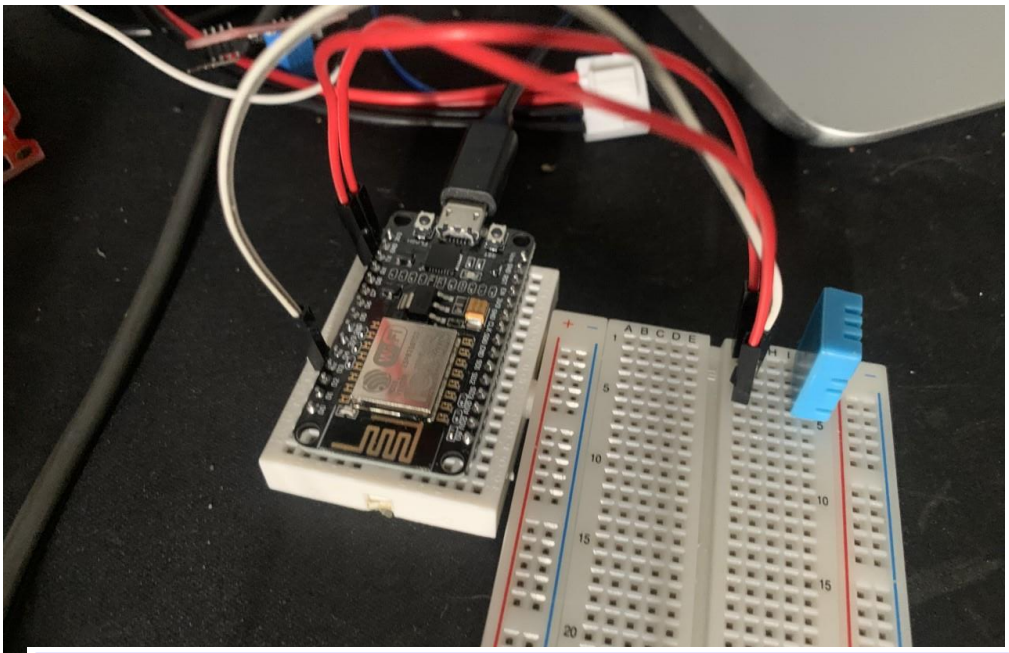
Descripción del proceso

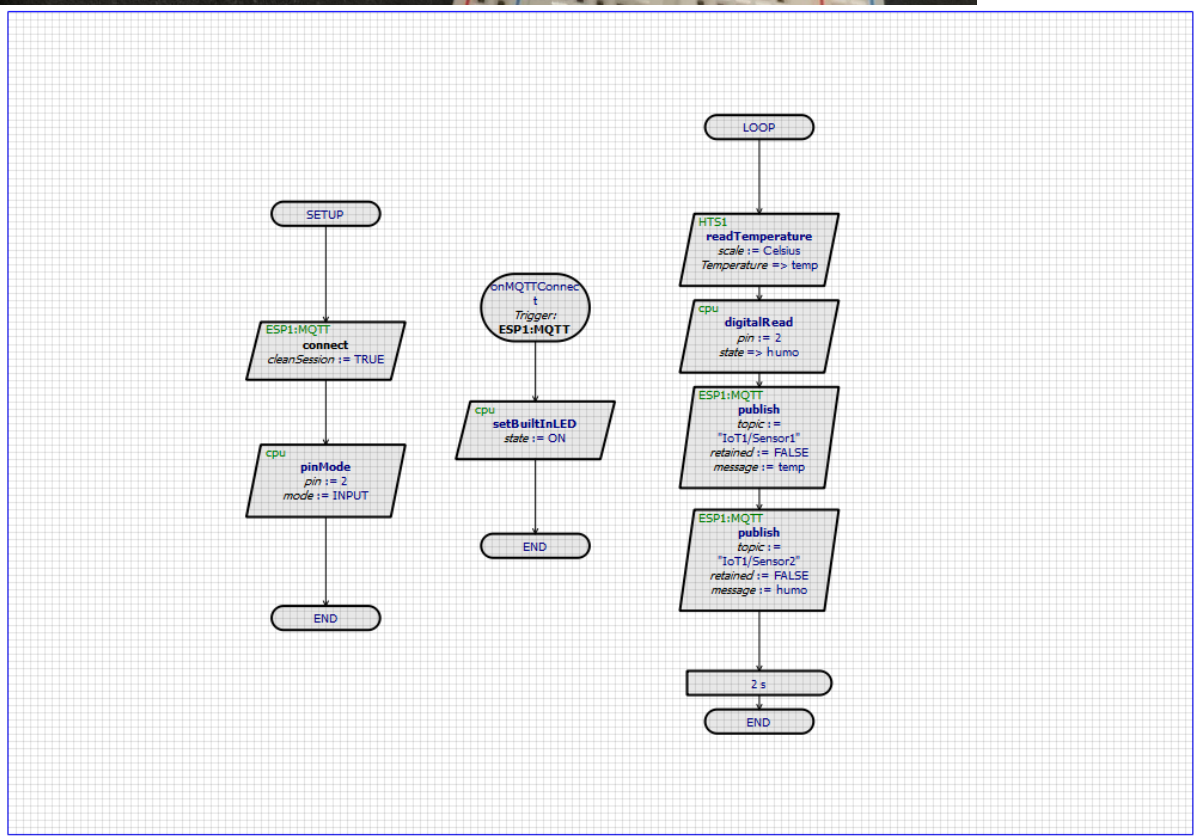
Para la creación del sensor de incendios, utilizamos la herramienta de Proteus. A continuación, se mostrará el proceso utilizado en este software para la creación del sensor para la temprana detección de incendios.

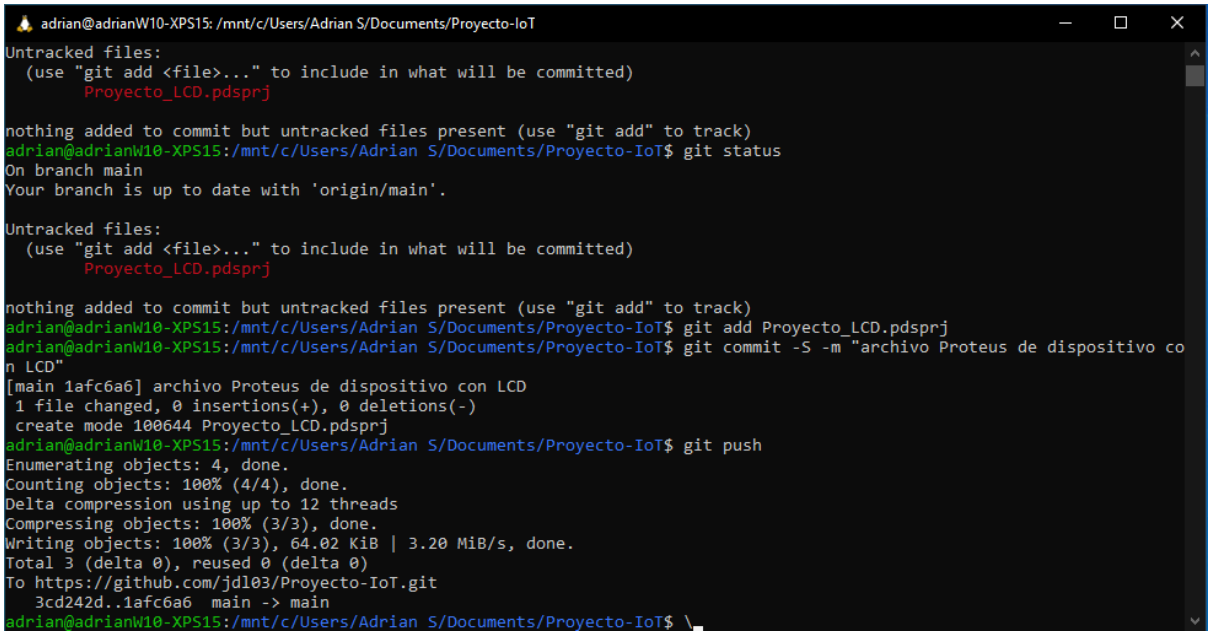


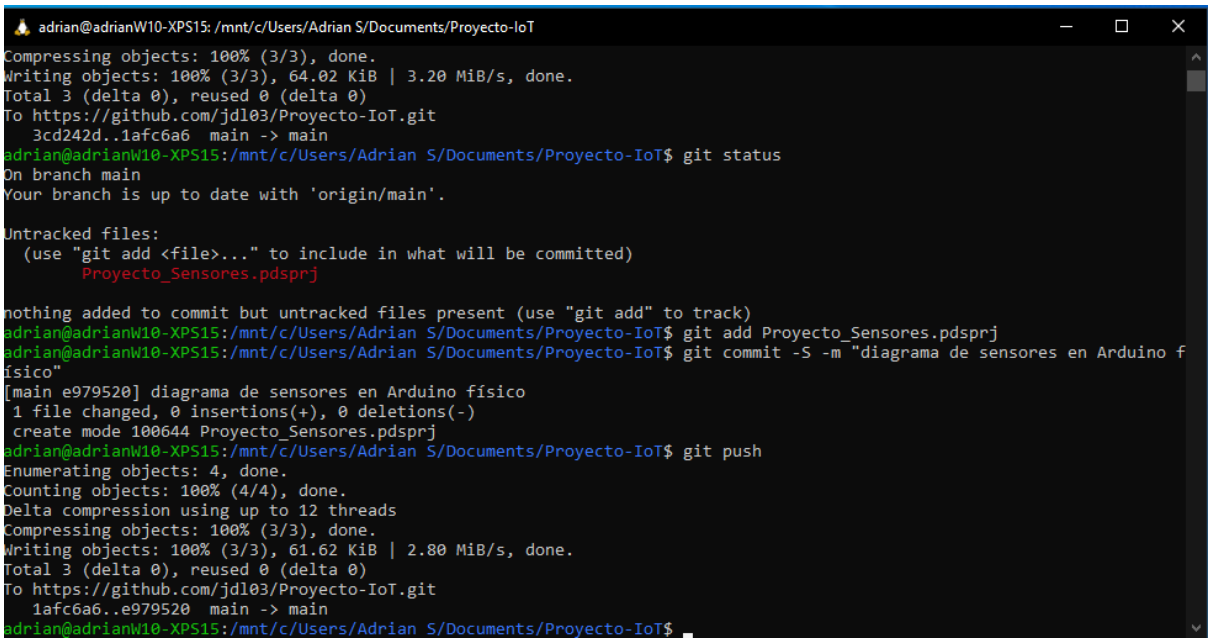


Por otra parte, a continuación se muestra una fotografía del dispositivo físico que se creó con los sensores planteados, y un diagrama de la lógica implementada:









Liga de Github:

https://github.com/jdl03/Proyecto-IoT.git

ANEXOS

Pruebas del Uso de Git y Github

```
BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github/Proyecto-IoT (main)
$ git add 'Herramientas utilizadas.docx'

BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github/Proyecto-IoT (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   Herramientas utilizadas.docx


BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github/Proyecto-IoT (main)
$ git commit -m "Mi parte del proyecto"
[main 8d45764] Mi parte del proyecto
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Herramientas utilizadas.docx
```

```
BULL PEN@LAPTOP-HH3AOBH1 MINGW64 ~/github/Proyecto-IoT (main)
$ git push
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 10.49 KiB | 5.25 MiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/jdl03/Proyecto-IoT.git
   e979520..e6caef5  main -> main
```

```
adrian@adrianW10-XPS15: /mnt/c/Users/Adrian S/Documents/Proyecto-IoT
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 8 (delta 1), reused 5 (delta 1), pack-reused 0
Unpacking objects: 100% (8/8), 16.96 KiB | 89.00 KiB/s, done.
From https://github.com/jdl03/Proyecto-IoT
   e979520..f265c72  main       -> origin/main
Updating e979520..f265c72
Fast-forward
 "Descripci\303\263n del Probolema.docx" | Bin 0 -> 6513 bytes
 Herramientas utilizadas.docx           | Bin 0 -> 12823 bytes
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 "Descripci\303\263n del Probolema.docx"
 create mode 100644 Herramientas utilizadas.docx
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents/Proyecto-IoT$ git add Solucion\ propuesta.docx
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents/Proyecto-IoT$ git commit -S -m "parrafo de solucion propuesta"
[main 19b2be2] parrafo de solucion propuesta
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Solucion propuesta.docx
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents/Proyecto-IoT$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 10.53 KiB | 718.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/jdl03/Proyecto-IoT.git
   f265c72..19b2be2  main -> main
adrian@adrianW10-XPS15:/mnt/c/Users/Adrian S/Documents/Proyecto-IoT$
```

```
Heriberto García@LAPTOP-PG77R9CN MINGW64 ~/Proyecto-IoT (main)
$ git pull
remote: Enumerating objects: 15, done.
remote: Counting objects: 100% (15/15), done.
remote: Compressing objects: 100% (12/12), done.
Uremote: Total 14 (delta 2), reused 13 (delta 1), pack-reused Onpack
  71% (10/14)
Unpacking objects: 100% (14/14), 136.86 KiB | 150.00 KiB/s, done.
From https://github.com/jdl03/Proyecto-IoT
   37e13b7..e6caef5  main       -> origin/main
Updating 37e13b7..e6caef5
Fast-forward
 .gitignore                    |   3 +++
 Herramientas utilizadas.docx | Bin 0 -> 12823 bytes
 Proyecto_LCD.pdsprj          | Bin 0 -> 65283 bytes
 Proyecto_Sensores.pdsprj     | Bin 0 -> 62762 bytes
 4 files changed, 3 insertions(+)
 create mode 100644 .gitignore
 create mode 100644 Herramientas utilizadas.docx
 create mode 100644 Proyecto_LCD.pdsprj
 create mode 100644 Proyecto_Sensores.pdsprj

Heriberto García@LAPTOP-PG77R9CN MINGW64 ~/Proyecto-IoT (main)
$ git pull
Already up to date.

Heriberto García@LAPTOP-PG77R9CN MINGW64 ~/Proyecto-IoT (main)
$ git pull
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 6.34 KiB | 11.00 KiB/s, done.
From https://github.com/jdl03/Proyecto-IoT
   e6caef5..f265c72  main       -> origin/main
Updating e6caef5..f265c72
Fast-forward
 "Descripci\303\263n del Probolema.docx" | Bin 0 -> 6513 bytes
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 "Descripci\303\263n del Probolema.docx"

Heriberto García@LAPTOP-PG77R9CN MINGW64 ~/Proyecto-IoT (main)
$ git push
Everything up-to-date

Heriberto García@LAPTOP-PG77R9CN MINGW64 ~/Proyecto-IoT (main)
$
```

```
PC1@DESKTOP-HTTAKVR MINGW64 ~/Entregable/Proyecto-Iot (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        introduccion.docx

nothing added to commit but untracked files present (use "git add" to track)

PC1@DESKTOP-HTTAKV
$ git add *

PC1@DESKTOP-HTTAKV
$ git commit -m "I
[main 3644d02] Int
 1 file changed, 0
 create mode 10064

PC1@DESKTOP-HTTAKV
$ git push
Enumerating object
Counting objects:
Delta compression
Compressing object
Writing objects: 1
Total 3 (delta 1),
remote: Resolving
To https://github.
   19b2be2..3644d0

PC1@DESKTOP-HTTAKV
$
```

```
nothing added to commit but untracked files present (use "git add" to track)
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git add *
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git commit -m "parte de Jorge De Leon"
[main 7d3dfb1] parte de Jorge De Leon
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 PARTE_JORGE_DE_LEON.docx
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git push origin
To https://github.com/jdl03/Proyecto-IoT.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/jdl03/Proyecto-IoT.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git push
To https://github.com/jdl03/Proyecto-IoT.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/jdl03/Proyecto-IoT.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git pull
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 9 (delta 1), reused 8 (delta 0), pack-reused 0
Unpacking objects: 100% (9/9), done.
From https://github.com/jdl03/Proyecto-IoT
   37e13b7..e979520  main       -> origin/main

[1]+  Stopped                 git pull
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ ls
PARTE_JORGE_DE_LEON.docx        Proyecto_LCD.pdsprj             Proyecto_Sensores.pdsprj        README.md
```

```
nothing added to commit but untracked files present (use "git add" to track)
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git add *
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git commit -m "parte de Jorge De Leon"
[main 7d3dfb1] parte de Jorge De Leon
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 PARTE_JORGE_DE_LEON.docx
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git push origin
To https://github.com/jdl03/Proyecto-IoT.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/jdl03/Proyecto-IoT.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git push
To https://github.com/jdl03/Proyecto-IoT.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/jdl03/Proyecto-IoT.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git pull
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 9 (delta 1), reused 8 (delta 0), pack-reused 0
Unpacking objects: 100% (9/9), done.
From https://github.com/jdl03/Proyecto-IoT
   37e13b7..e979520  main       -> origin/main

[1]+  Stopped                 git pull
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ ls
PARTE_JORGE_DE_LEON.docx        Proyecto_LCD.pdsprj             Proyecto_Sensores.pdsprj        README.md
```

```
[1]+  Stopped                 git pull
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ ls
PARTE_JORGE_DE_LEON.docx        Proyecto_LCD.pdsprj             Proyecto_Sensores.pdsprj        README.md
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git pull
error: You have not concluded your merge (MERGE_HEAD exists).
hint: Please, commit your changes before merging.
fatal: Exiting because of unfinished merge.
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git commit -m "cambios jorge"
[main 55acc1a] cambios jorge
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git status
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git pull
remote: Enumerating objects: 16, done.
remote: Counting objects: 100% (16/16), done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 14 (delta 3), reused 11 (delta 2), pack-reused 0
Unpacking objects: 100% (14/14), done.
From https://github.com/jdl03/Proyecto-IoT
   e979520..3644d02  main       -> origin/main
error: There was a problem with the editor 'vi'.
Not committing merge; use 'git commit' to complete the merge.
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ ls
Descripción del Probolema.docx  PARTE_JORGE_DE_LEON.docx        Proyecto_Sensores.pdsprj        Solucion propuesta.docx
Herramientas utilizadas.docx    Proyecto_LCD.pdsprj             README.md                       introduccion.docx
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ ls
Descripción del Probolema.docx  PARTE_JORGE_DE_LEON.docx        Proyecto_Sensores.pdsprj        Solucion propuesta.docx
Herramientas utilizadas.docx    Proyecto_LCD.pdsprj             README.md                       introduccion.docx
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ git push origin
To https://github.com/jdl03/Proyecto-IoT.git
 ! [rejected]        main -> main (non-fast-forward)
error: failed to push some refs to 'https://github.com/jdl03/Proyecto-IoT.git'
hint: Updates were rejected because the tip of your current branch is behind
hint: its remote counterpart. Integrate the remote changes (e.g.
hint: 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
MacBook-Pro-de-Administrador:Proyecto-IoT admin$ ls
Descripción del Probolema.docx  PARTE_JORGE_DE_LEON.docx        Proyecto_Sensores.pdsprj        Solucion propuesta.docx
Herramientas utilizadas.docx    Proyecto_LCD.pdsprj             README.md                       introduccion.docx
MacBook-Pro-de-Administrador:Proyecto-IoT admin$
```