



IUS
INSTITUT
UNIVERSITAIRE
DES SCIENCES

INSTITUT UNIVERSITAIRE DES SCIENCES (IUS)

Faculté des sciences et des technologies (FST)

TD N° 1 – Système

Préparé par : Brian ANTOINE

Présenté à: M. Ismaël SAINT AMOUR

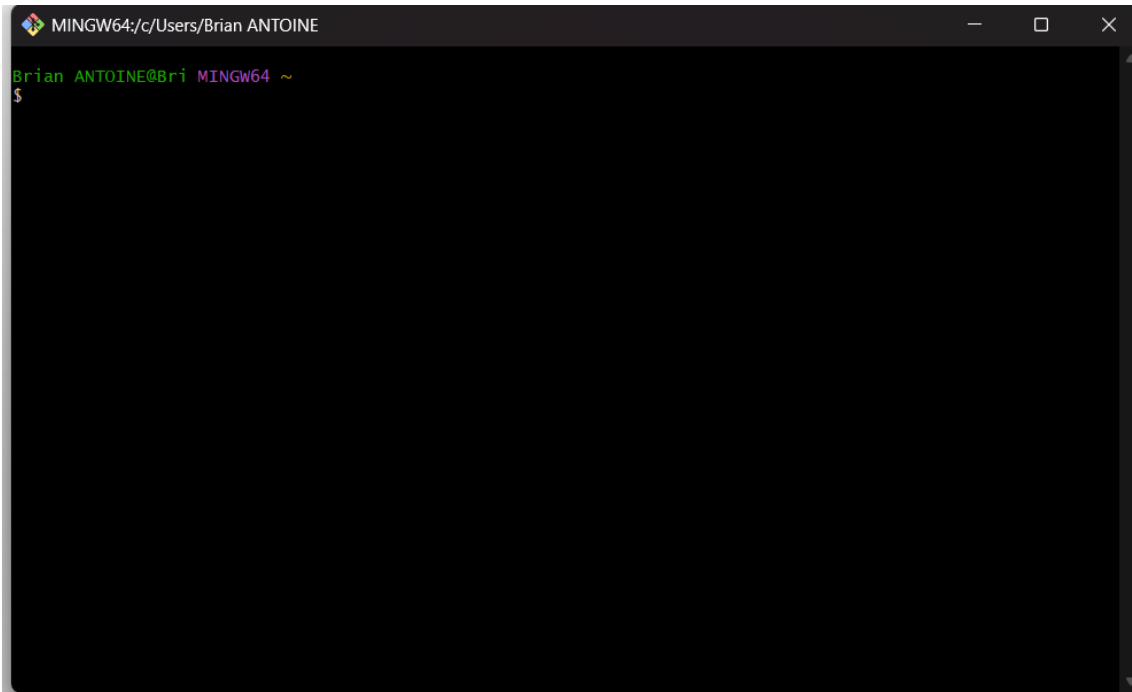
Niveau : L3

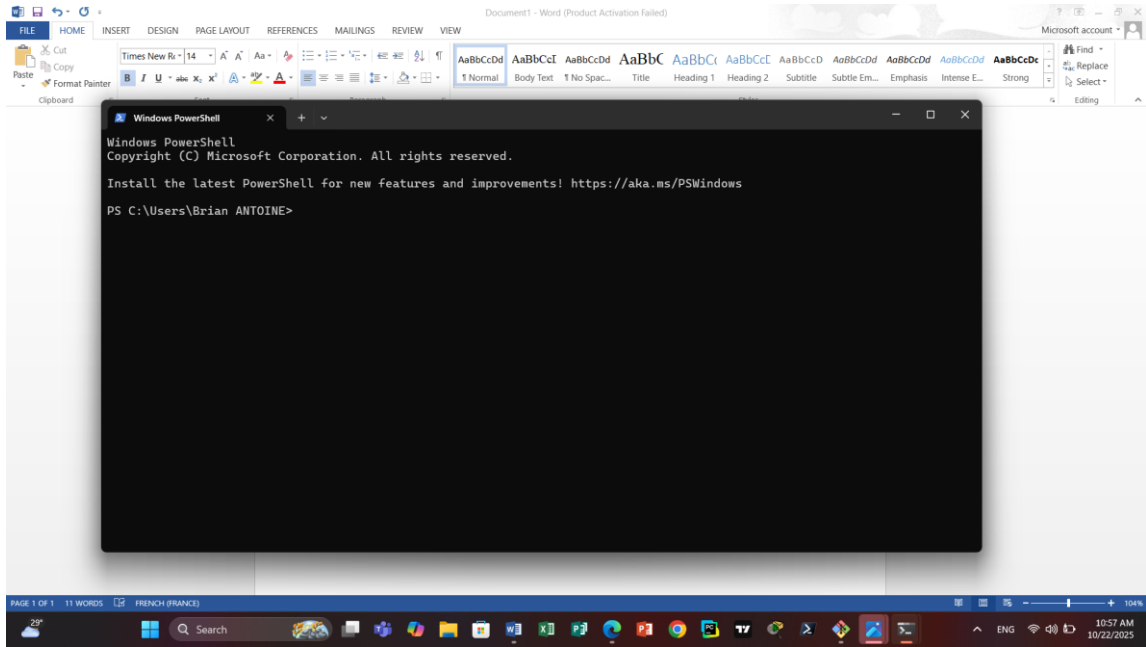
Date : 22/10/2025

L'objectif de ce TD est :

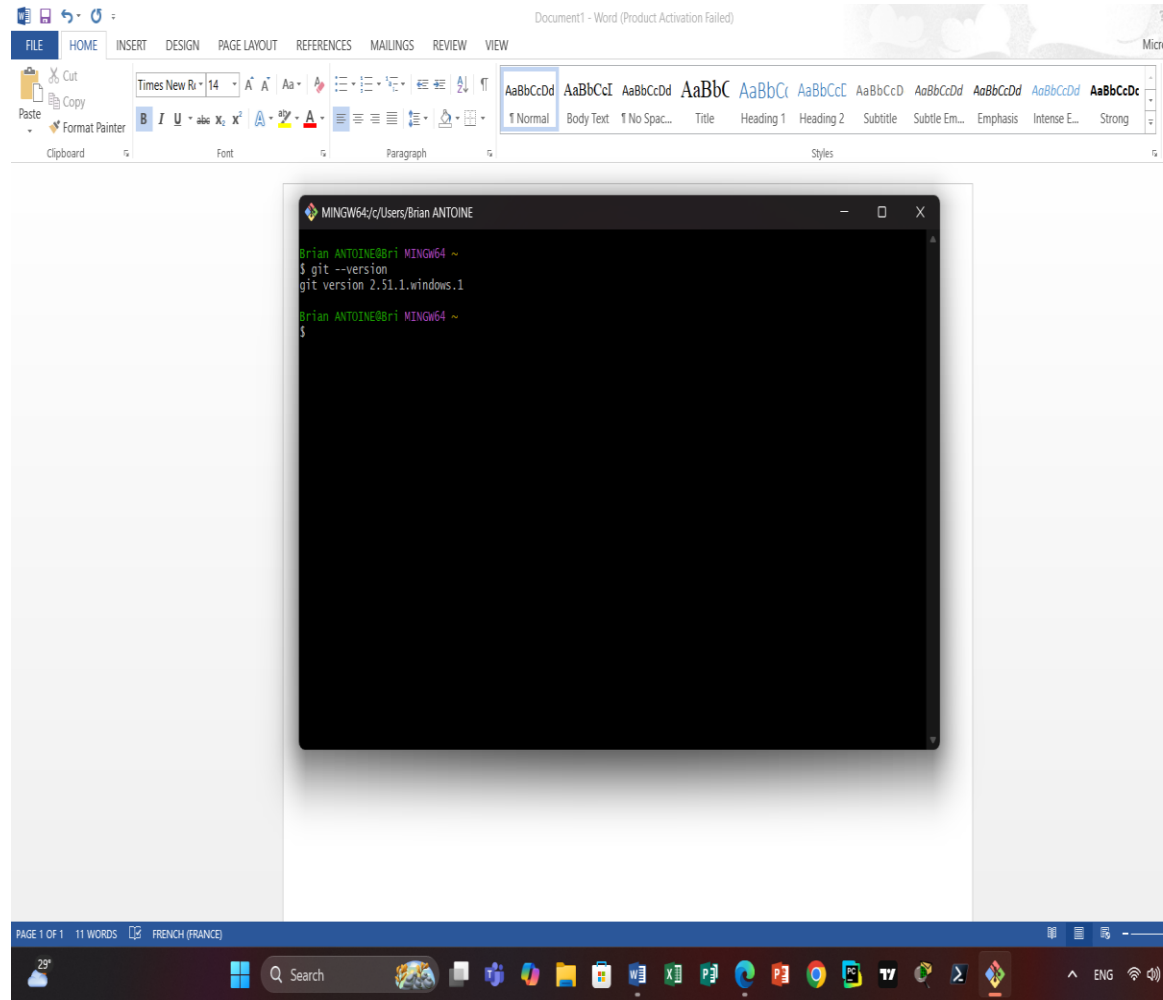
- Comprendre les concepts de base de Git (système de gestion de versions)
- Savoir utiliser Git pour un projet localement
- Découvrir GitHub et apprendre à collaborer sur un dépôt distant

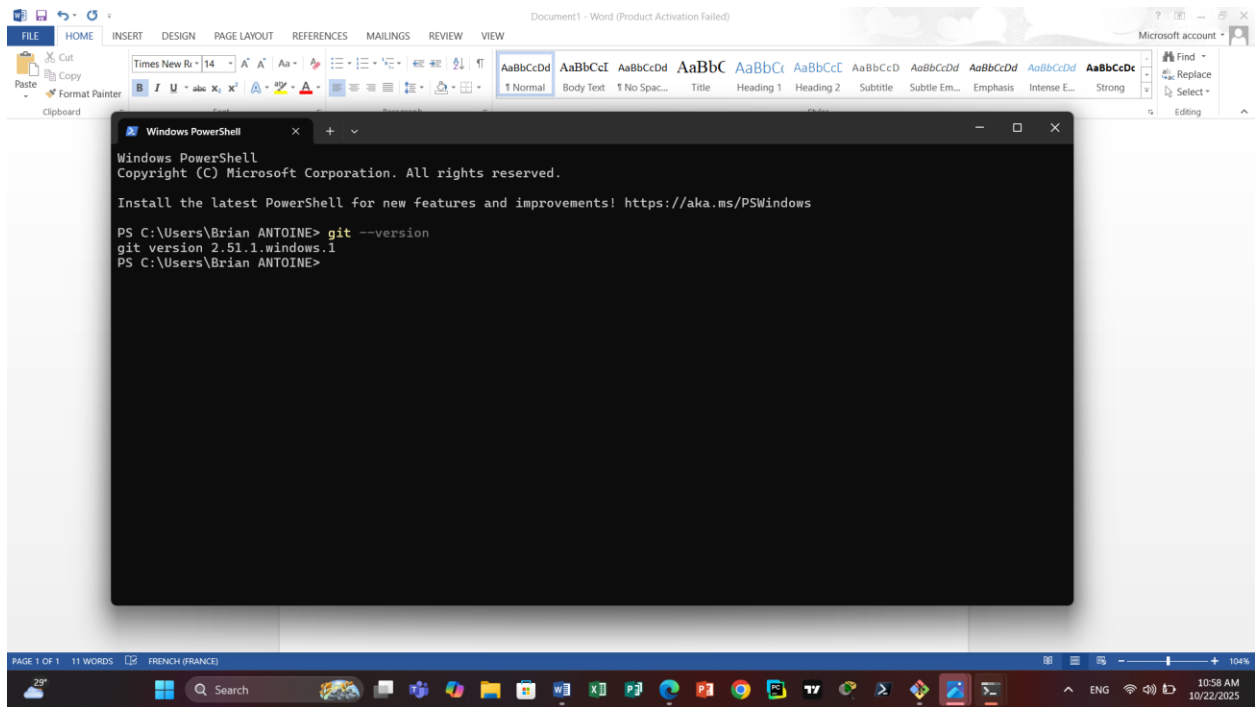
I. Installation de Git sur Windows et utilisation avec PowerShell



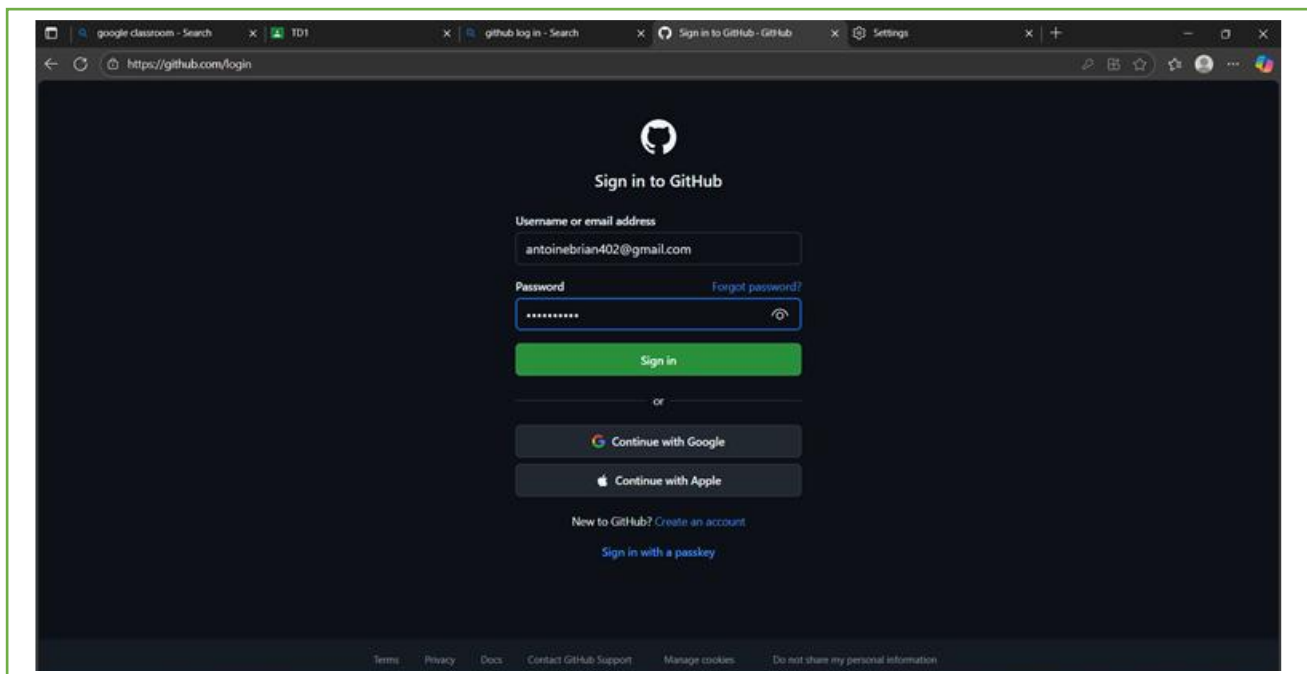


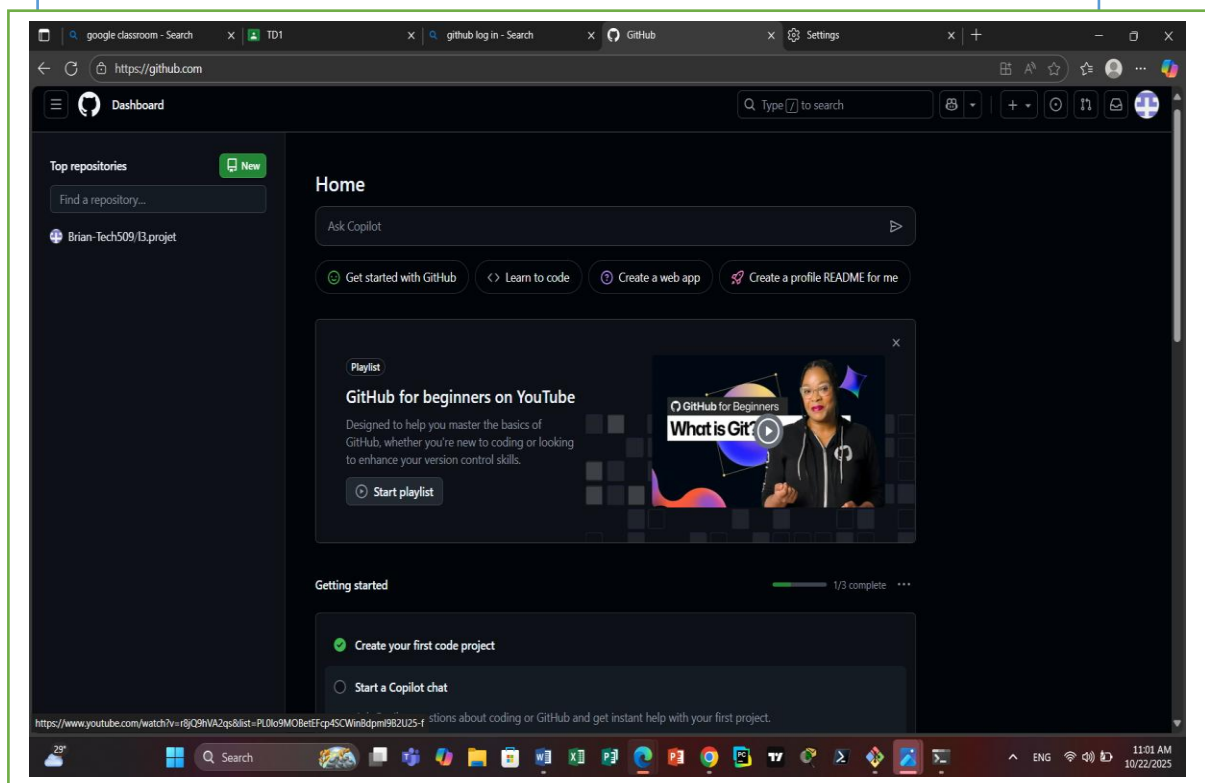
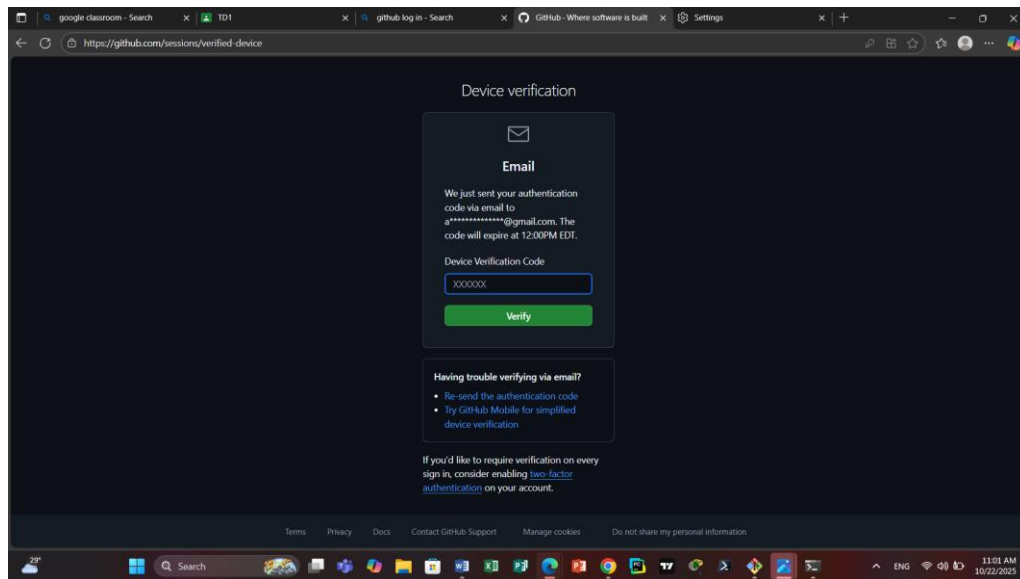
II. Vérification de l'installation



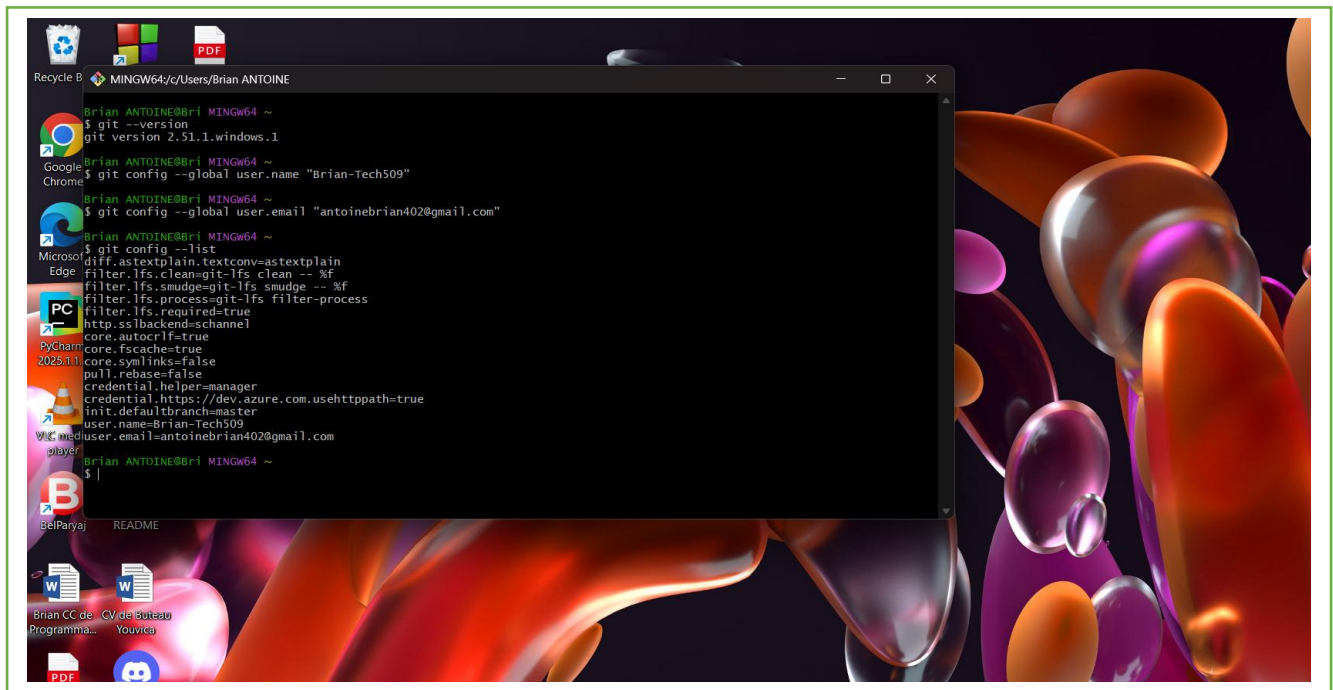


III. Création d'un compte Git Hub





IV. Configuration et vérification de Git



- **Pour configurer Git, on utilise le commande ;**

`git config --global user.name "....."`

`git config --global user.email "....."`

- **Pour faire la vérification on fait :**

`git config --list`

V. Testons Git avec PowerShell

```
MINGW64/c/Users/Brian ANTOINE
init.defaultbranch=master
user.name=Brian-Tech509
user.email=antoinebrian402@gmail.com

Brian ANTOINE@Bri MINGW64 ~
$ ls
bash: '$'\302\234ls': command not found

Brian ANTOINE@Bri MINGW64 ~
$ ls
AppData/
'Application Data'@
'Cisco Packet Tracer 7.3.0'/
Contacts/
Cookies@
Desktop/
Documents/
Downloads/
Favorites/
IntelGraphicsProfiles/
Links/
'Local Settings'@
Music/
'My Documents'@
NTUSER.DAT
NTUSER.DAT{17b2062b-2786-11f0-8ca4-c5f4d6c362fd}.TM.b1f
NTUSER.DAT{17b2062b-2786-11f0-8ca4-c5f4d6c362fd}.TMContainer000000000000000001.regtrans-ms
NTUSER.DAT{17b2062b-2786-11f0-8ca4-c5f4d6c362fd}.TMContainer000000000000000002.regtrans-ms
NetHood@
OneDrive/
Pictures/

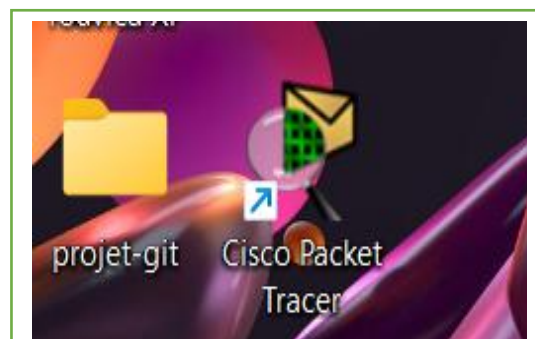
PrintHood@
PyCharmMiscProject/
PycharmProjects/
Recent@
'Saved Games' /
Searches/
SendTo@
'Start Menu'@
Templates@
Videos/
jcef_19104.log
jcef_19132.log
jcef_19480.log
jcef_5472.log
main.py
notes_simples.txt/
ntuser.dat.LOG1
ntuser.dat.LOG2
ntuser.ini
systeme/

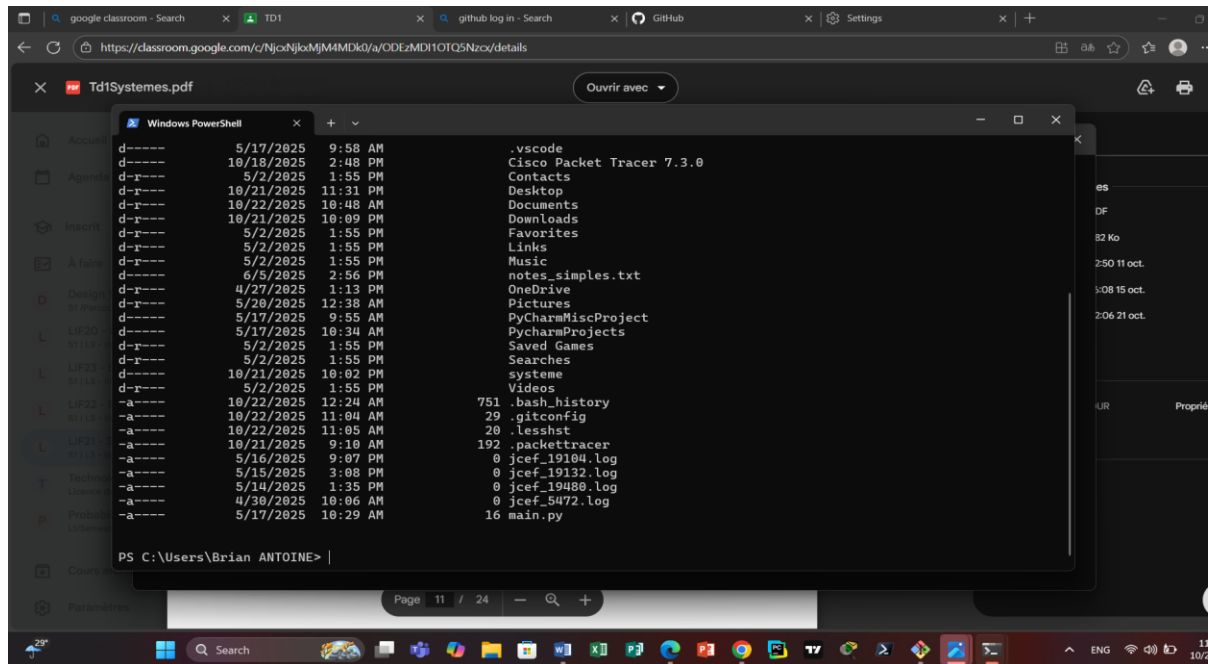
Brian ANTOINE@Bri MINGW64 ~
$
```

```
Brian ANTOINE@Bri MINGW64 ~
$ cd Desktop

Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ mkdir projet-git

Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ cd projet-git
```

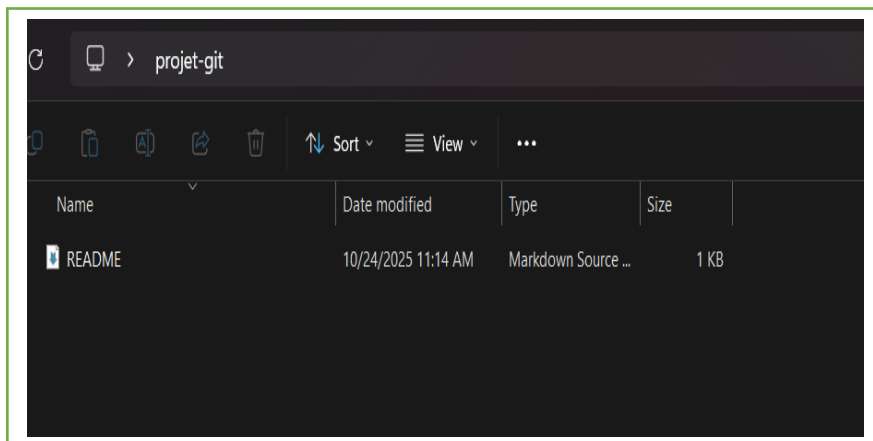




Initialisation d'un dépôt :

On utilise : git init

Création du fichier :



```
MINGW64:/c/Users/Brian ANTOINE/Desktop/projet-git
$ cd Desktop
Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ mkdir projet-git
Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ cd projet-git
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ git init
Initialized empty Git repository in C:/Users/Brian ANTOINE/Desktop/projet-git/.git/
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ echo "Hello Git!" > README.md
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ git commit -m "Premier commit avec Powershell"
[master (root-commit) d54d712] Premier commit avec Powershell
1 file changed, 1 insertion(+)
 create mode 100644 README.md
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ git status
On branch master
nothing to commit, working tree clean
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
```

Historique des Commits

```
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ git log
commit d54d712f687b620806f10726e0b2aa123dc3327f (HEAD -> master)
Author: Brian-Tech509 <antoinebrian402@gmail.com>
Date:   Fri Oct 24 11:16:21 2025 -0400

    Premier commit avec Powershell
Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$
```

VI. Génération d'une nouvelle clé SSH

```
MINGW64:/c/Users/Brian ANTOINE/Desktop/projet-git
create mode 100644 README.md

Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ git status
On branch master
nothing to commit, working tree clean

Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ git log
commit d54d712f687b620806f10726e0b2aa123dc3327f (HEAD -> master)
Author: Brian-Tech509 <antoinebrian402@gmail.com>
Date:   Fri Oct 24 11:16:21 2025 -0400

    Premier commit avec Powershell

Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$ ssh-keygen -t rsa -b 4096 -C "antoinebrian402@gmail.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/Brian ANTOINE/.ssh/id_rsa):
/c/Users/Brian ANTOINE/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Enter passphrase for "/c/Users/Brian ANTOINE/.ssh/id_rsa" (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/Brian ANTOINE/.ssh/id_rsa
Your public key has been saved in /c/Users/Brian ANTOINE/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:FC13g01/SBPweyd4wKbCy/wTq21ae8B3JW6a4UbAX4 antoinebrian402@gmail.com
The key's randomart image is:
+---[RSA 4096]-----+
|
|  .o.o.
|  .+.* o .
|  o...O ...
|  o  +.Eo .
|  S . *+O..
|  o o o Oo*
|  +  +.B.
|  .  +...
|  .  .. .o
+---[SHA256]-----+

Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)
$
```

Affichage de la clé publique

```
6p5/K6+Abl8TJas3Lvm0zz5iSEA6KcowBTGNXcaaW3RxD0gSjtzuvTXq/7TlDbQkve2sAS
RMCj5csOK2v4ZX+z+lw73SSap6zspIITY9HsVpQF04kstusEIZALE1kStrpCgD0bYH+Tm3
9wjWDX8g/7cAAAZYW50b21uZWjyawFuNDAYQGdtYwLsLmNvbQEC
-----END OPENSSH PRIVATE KEY-----
```


Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)

\$ cat ~/.ssh/id_rsa.pub

```
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDCAHqqPfiP7mU82ZTcVrviaaprR2USTqjJzNDaKMv4DT0Wo7vKVAjDSWdAS+jBL1AZijcYDr9shiK/tdfmAC+fSP9PKhJRLaoY8qXNlOAWcMEh0Spn9q8XcGS2M4XNG7bV4h/BIp7kXiGMdOcaTc1fAYGbaZ5Hmbic7CAD/dTW38IW3vFRFkj+Bq8dOPB23ribUx1+egRbMRcC0/9P9UqqqEa5IgtJof0CYI6W0A12I8QEqY6hmTuM+o1KEqEwhjttqsbz6gZDL9kG4wDH4QHf2MnCym1GDZw7dgMZkXMmcy8y5Cbx19E8QJF/qKHHU96TI25jQeSV052nThUSTIyv5rUvX9puArn1ak/I+E0yLnGINysWr1GBJHm2EKP0YGbIE2KmhTgGZyCLGj1Datcw/0ZGyfo9KS1ydXxktRyXGQIHl+UDjDL2WKFIq3RatP1CJPRAOF1dEOAwxG8KFLnMLctEUUnTHWrWhLarkEPXQ/5K2U9mBycswwELTLrnajpFBhr6Phc312fclDl+YhzDrY90c/lcv/AXKuDVxYsnKRZ/hc9JE3IBx6jr8doangbUUJK+UgdpFshbtq7wSYxOes+og2USNm4AVfTaqKaUxH3bW0sciajMafwLoqjd7hPY2E2gYDI9KHDytlhbyuDrAfPdaQhD9rusW4gjF8fQ== antoinebrian402@gmail.com
```

Brian ANTOINE@Bri MINGW64 ~/Desktop/projet-git (master)

\$

**Brian-Tech509** (Brian-Tech509)
Your personal account

[Go to your personal profile](#)

Public profile

Account

Appearance

Accessibility

Notifications

Access

Billing and licensing

Emails

Password and authentication

Sessions

SSH and GPG keys

Organizations

Enterprises

Moderation

Code, planning, and automation

Repositories

Codespaces

Add new SSH Key

Title

Clé Windows Brian


Key type

Authentication Key

Key

ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQDCAHqqPfiP7mU82ZTcVrviaaprR2USTqjJzNDaKMv4DT0Wo7vKVAjDSWdAS+jBL1AZijcYDr9shiK/tdfmAC+fSP9PKhJRLaoY8qXNlOAWcMEh0Spn9q8XcGS2M4XNG7bV4h/BIp7kXiGMdOcaTc1fAYGbaZ5Hmbic7CAD/dTW38IW3vFRFkj+Bq8dOPB23ribUx1+egRbMRcC0/9P9UqqqEa5IgtJof0CYI6W0A12I8QEqY6hmTuM+o1KEqEwhjttqsbz6gZDL9kG4wDH4QHf2MnCym1GDZw7dgMZkXMmcy8y5Cbx19E8QJF/qKHHU96TI25jQeSV052nThUSTIyv5rUvX9puArn1ak/I+E0yLnGINysWr1GBJHm2EKP0YGbIE2KmhTgGZyCLGj1Datcw/0ZGyfo9KS1ydXxktRyXGQIHl+UDjDL2WKFIq3RatP1CJPRAOF1dEOAwxG8KFLnMLctEUUnTHWrWhLarkEPXQ/5K2U9mBycswwELTLrnajpFBhr6Phc312fclDl+YhzDrY90c/lcv/AXKuDVxYsnKRZ/hc9JE3IBx6jr8doangbUUJK+UgdpFshbtq7wSYxOes+og2USNm4AVfTaqKaUxH3bW0sciajMafwLoqjd7hPY2E2gYDI9KHDytlhbyuDrAfPdaQhD9rusW4gjF8fQ== antoinebrian402@gmail.com

Add SSH key

**Brian-Tech509** (Brian-Tech509)
Your personal account

[Go to your personal profile](#)

Public profile

Account

Appearance

Accessibility

Notifications

Access

Billing and licensing

Emails

Password and authentication

Sessions

SSH and GPG keys

Organizations


Enterprises

SSH keys

New SSH key

This is a list of SSH keys associated with your account. Remove any keys that you do not recognize.

Authentication keys



Clé Windows Brian

SHA256: FC13g8t/SBPweyd4wKbCy/vWTq21ae8B37l6a4UbaX4

Added on Oct 24, 2025

Never used — Read/write

Delete

Check out our guide to [connecting to GitHub using SSH keys](#) or [troubleshoot common SSH problems](#).

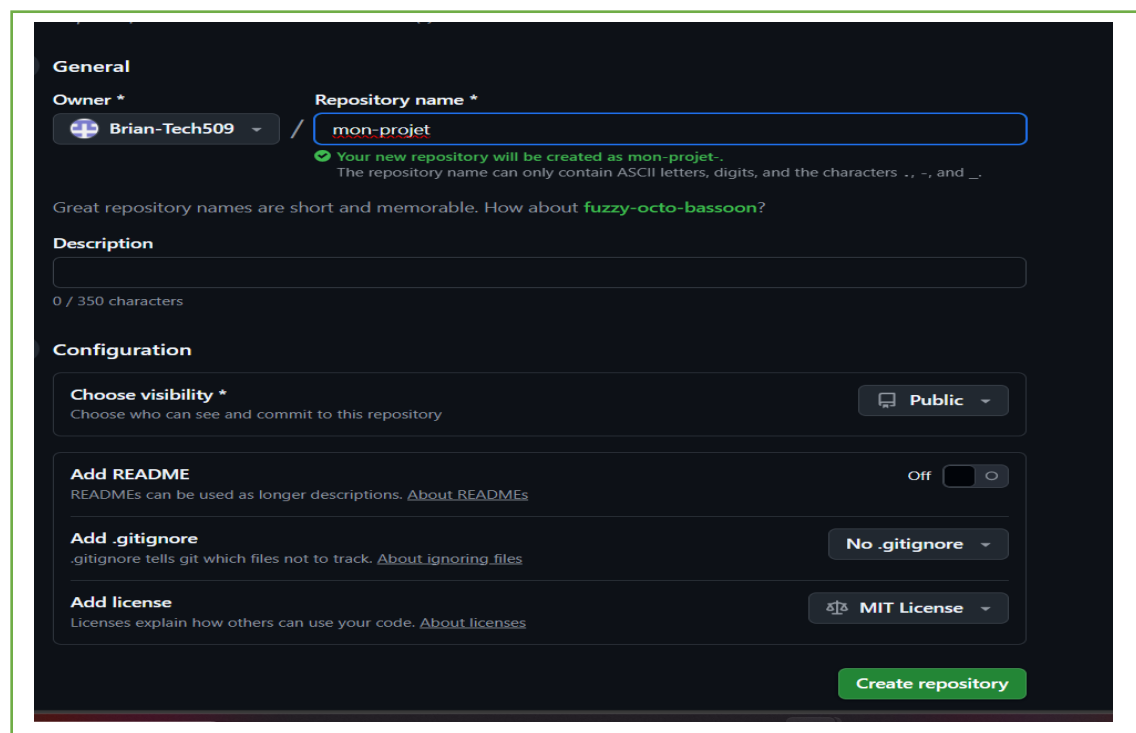
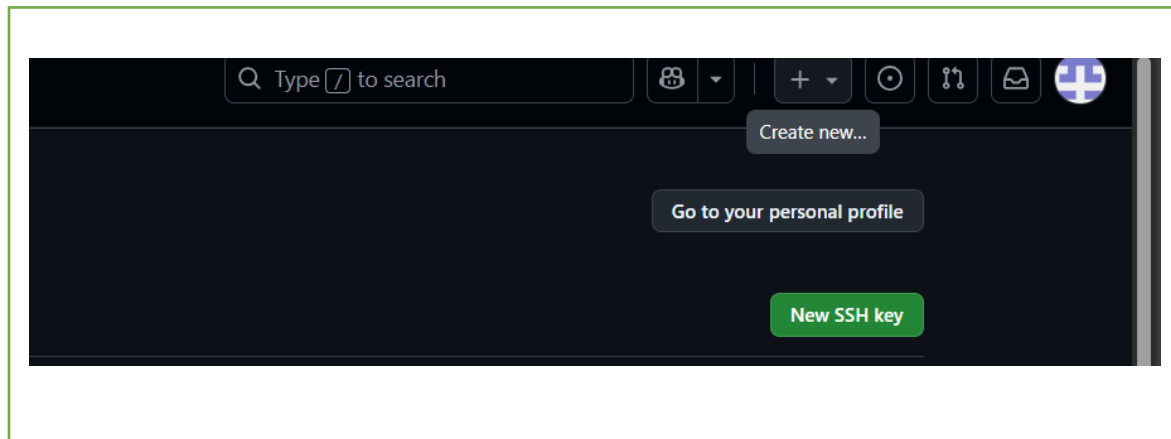
GPG keys

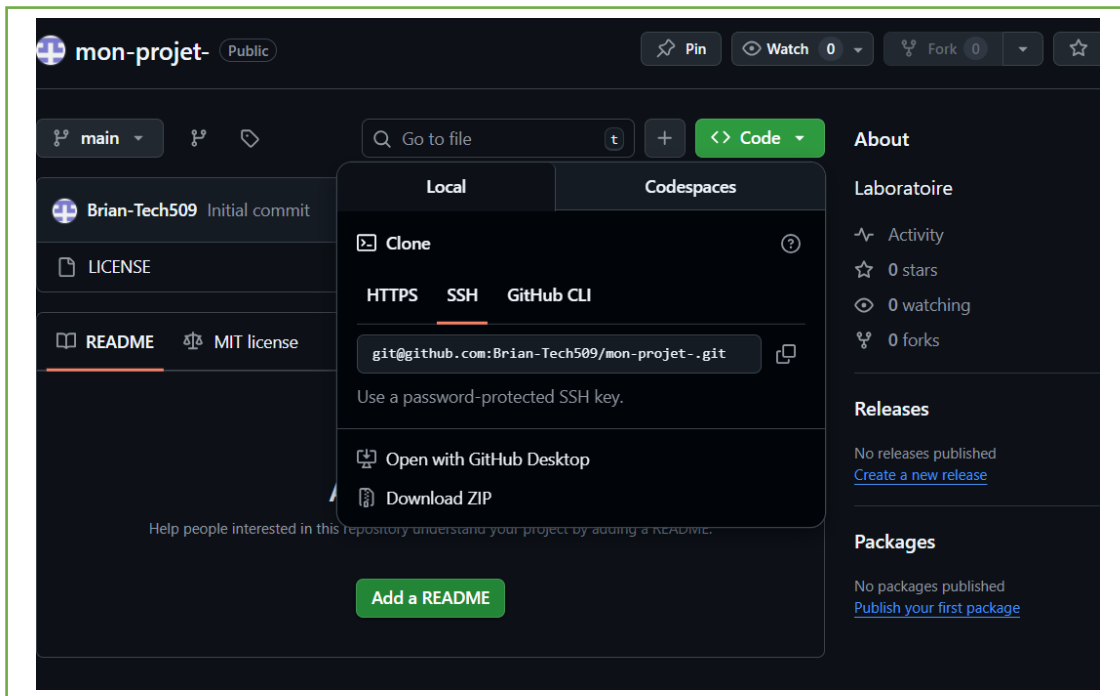
New GPG key

There are no GPG keys associated with your account.

Learn how to [generate a GPG key and add it to your account](#).

VII. Création d'un depot GitHub





VIII. Clonons un depot GitHub via SSH

```
MINGW64 ~/C:/Users/Brian ANTOINE/Desktop
Brian ANTOINE@Bri MINGW64 ~
$ cd Desktop

Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ git clone git@github.com:Brian-Tech509/mon-projet-.git
Cloning into 'mon-projet-'...
The authenticity of host 'github.com (140.82.112.4)' can't be established.
ED25519 key fingerprint is: SHA256:+DiY3wvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqu
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
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 (from 0)
Receiving objects: 100% (3/3), done.

Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ |
```

```
MINGW64:/c:/Users/Brian ANTOINE/Desktop/mon-projet-
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 (from 0)
Receiving objects: 100% (3/3), done.

Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ ls
BelParyaj.lnk*      'CV de Buteau Youvica XP.docx'  Discord.lnk*      ii/
'Brian CC de Programmation.docx' 'CV de Buteau Youvica.docx'    'Visual Studio Code.lnk'*  mon-projet-/
'Brian CC de Programmation.pdf'  'Cisco Packet Tracer.lnk'*     desktop.ini        projet-git/
'CV Buteau Youvica.docx'         CodeBlocks.lnk*                ebook.pdf

Brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ cd mon-projet-

Brian ANTOINE@Bri MINGW64 ~/Desktop/mon-projet- (main)
$ echo "systeme d'exploitation!" > Module.txt

Brian ANTOINE@Bri MINGW64 ~/Desktop/mon-projet- (main)
$ git add .
warning: in the working copy of 'Module.txt', LF will be replaced by CRLF the next time Git touches it

Brian ANTOINE@Bri MINGW64 ~/Desktop/mon-projet- (main)
$ git commit -m "Ajout Module"
[main 1892a18] Ajout Module
1 file changed, 1 insertion(+)
create mode 100644 Module.txt

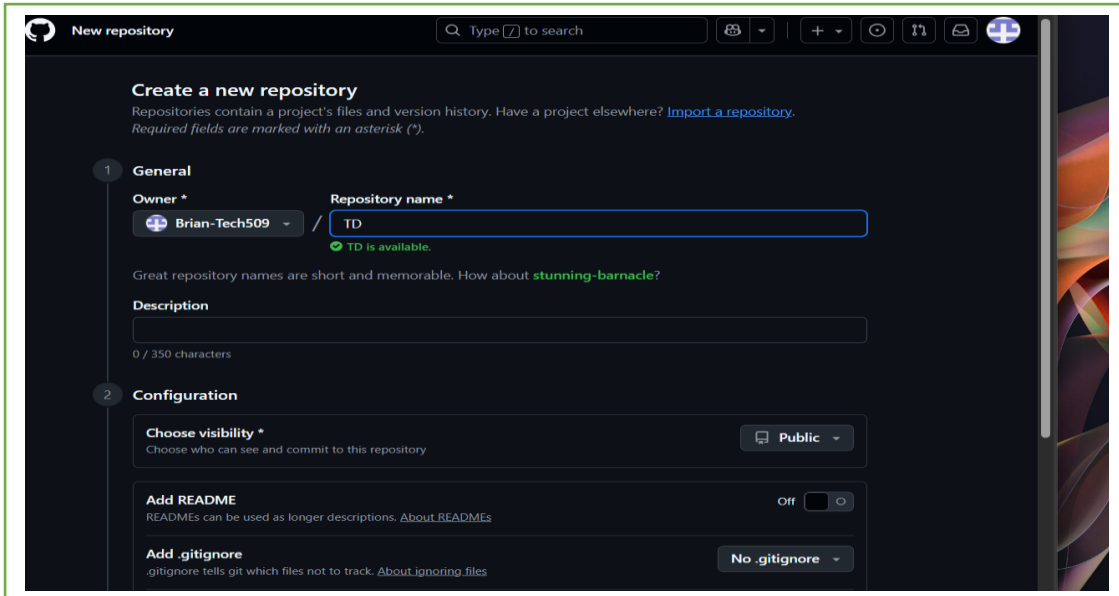
Brian ANTOINE@Bri MINGW64 ~/Desktop/mon-projet- (main)
$ git branch -M main

Brian ANTOINE@Bri MINGW64 ~/Desktop/mon-projet- (main)
$ git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 308 bytes | 77.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:Brian-Tech509/mon-projet-.git
7f06439..1892a18  main -> main
branch 'main' set up to track 'origin/main'.

Brian ANTOINE@Bri MINGW64 ~/Desktop/mon-projet- (main)
$ |
```


Exercice 2

Nouveau dépôt sur Github “TD”



Create a new repository

Repositories contain a project's files and version history. Have a project elsewhere? [Import a repository](#).
Required fields are marked with an asterisk (*).

1 General

Owner * Brian-Tech509 / Repository name * TD
TD is available.

Great repository names are short and memorable. How about **stunning-barnacle**?

Description
0 / 350 characters

2 Configuration

Choose visibility * Public
Choose who can see and commit to this repository

Add README Off
READMEs can be used as longer descriptions. [About READMEs](#)

Add .gitignore No .gitignore
.gitignore tells git which files not to track. [About ignoring files](#)

```
brian ANTOINE@Bri MINGW64 ~/Desktop (master)
$ cd TD

brian ANTOINE@Bri MINGW64 ~/Desktop/TD (main)
$ mkdir systeme

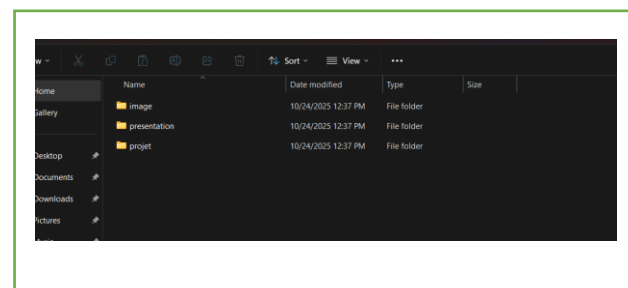
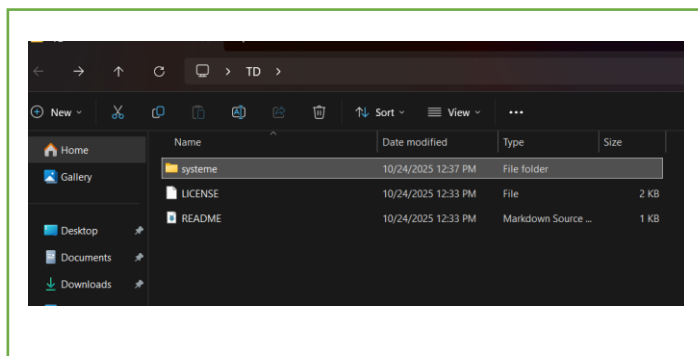
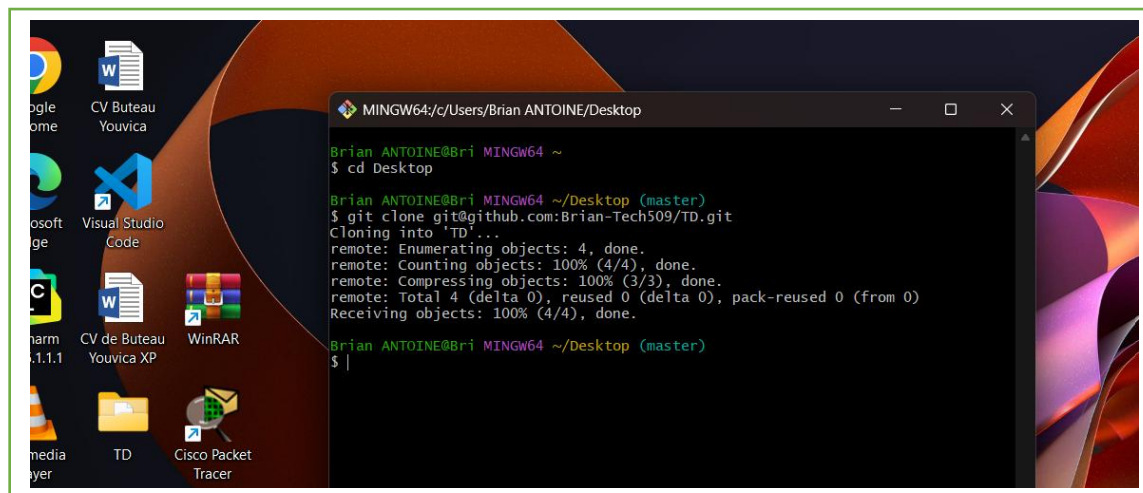
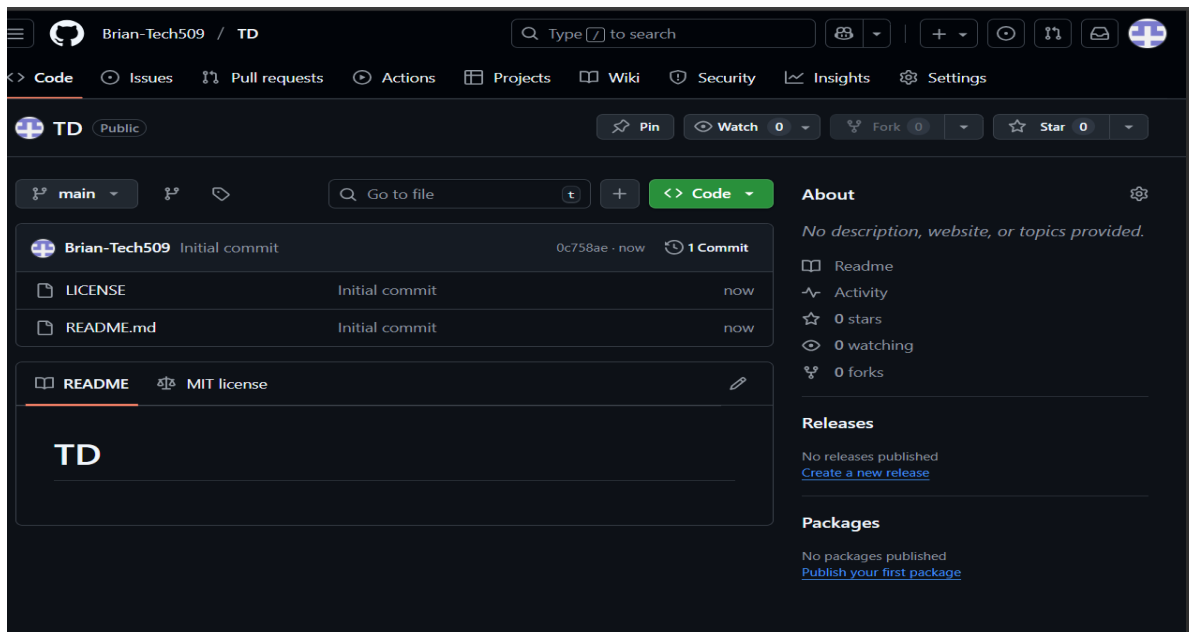
brian ANTOINE@Bri MINGW64 ~/Desktop/TD (main)
$ cd systeme

brian ANTOINE@Bri MINGW64 ~/Desktop/TD/systeme (main)
$ mkdir projet

brian ANTOINE@Bri MINGW64 ~/Desktop/TD/systeme (main)
$ mkdir presentation

brian ANTOINE@Bri MINGW64 ~/Desktop/TD/systeme (main)
$ mkdir image

brian ANTOINE@Bri MINGW64 ~/Desktop/TD/systeme (main)
$ |
```



CONCLUSION

Ce TD m'a permis de comprendre les fondements du système de gestion de versions Git, d'apprendre à gérer un projet localement avec cet outil. Sur un dépôt distant.

Alors, je sais maintenant comment utiliser Git pour un projet localement et faire la découverte de github pour pouvoir collaborer.

Fort heureusement la tâche est réussie malgré des petites difficultés rencontrées lors de l'hébergement. Au commencement, pour configurer git, je l'avais fait avec mon 'user.name', et ça n'avait pas marché correctement et du coup j'ai utilisé mon email et mon user name et ça a fonctionné pour les deux.