



**Faculté des Sciences et Technologies  
(FST)**

**Rapport du travail de Laboratoire № 1 \_Systèmes**

**Etudiant : Donsam Jean Gabard NOEL**

**L3**

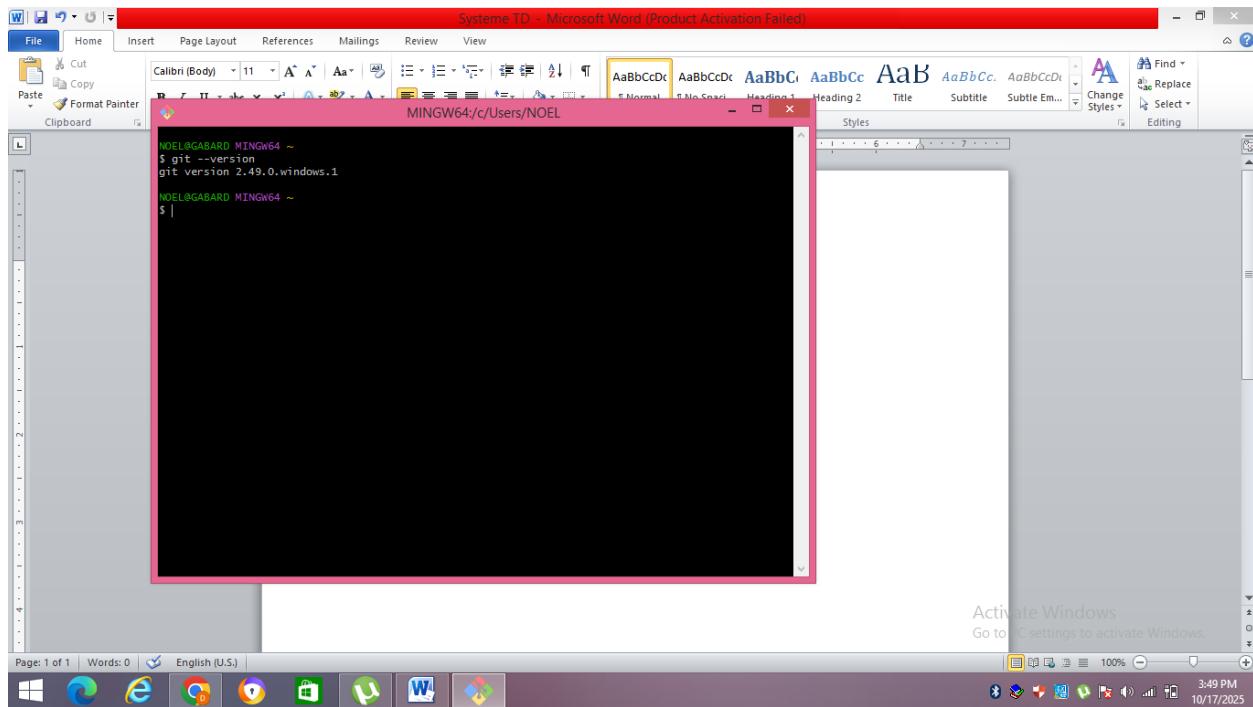
**Octobre 2025**

## **L'objectif de ce TD est de :**

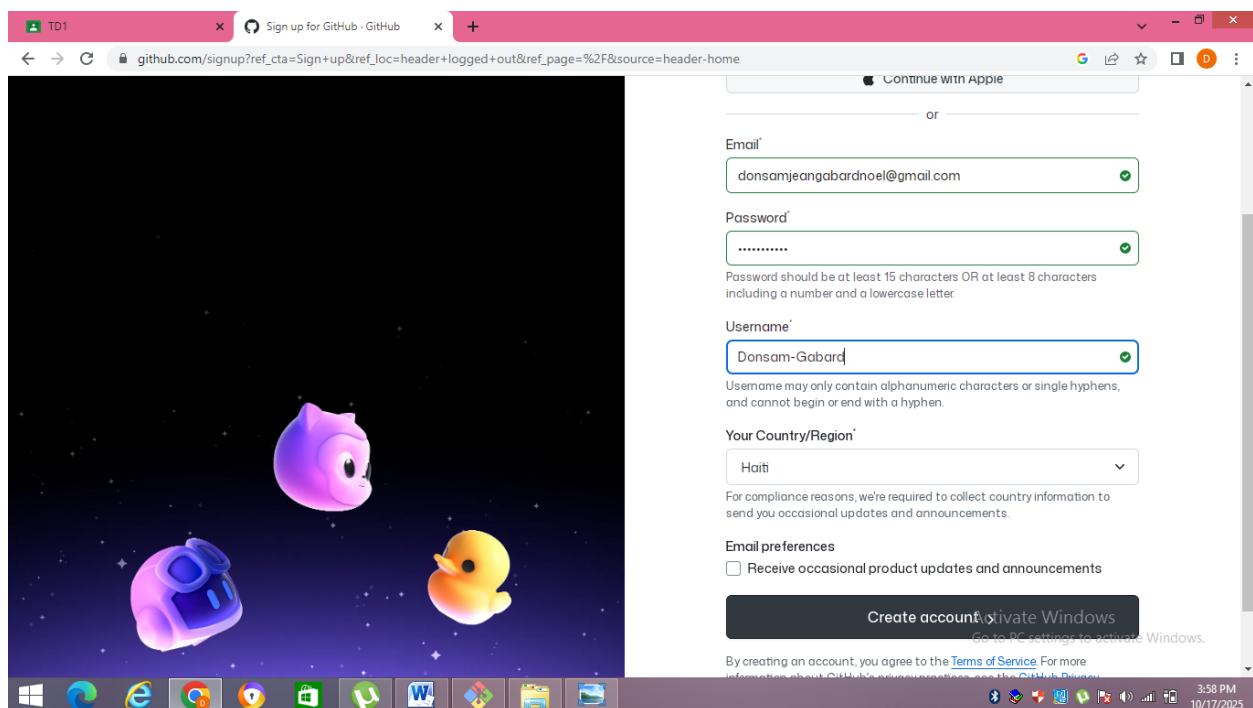
- Comprendre les concepts de base de Git (système de gestion de versions).
- Savoir utiliser Git pour gérer un projet localement.
- Découvrir GitHub et apprendre à collaborer sur un dépôt distant.

## Exercice 1

### ❖ Vérification de l'installation de Git sur Windows :



### ❖ Crédit de mon compte GitHub :



TD1 GitHub Dashboard

github.com/dashboard

Dashboard

Type to search

Create your first project

Ready to start building? Create a repository for a new idea or bring over an existing repository to keep contributing to it.

Create repository Import repository

Home

Ask Copilot

Get started with GitHub Learn to code Create a web app

Playlist GitHub for beginners on YouTube

Designed to help you master the basics of GitHub, whether you're new to coding or looking to enhance your version control skills.

Start playlist

Getting started 0/3 complete

Activate Windows Go to PC settings to activate Windows.

Windows taskbar: 4:01 PM 10/17/2025

TD1 Donsam-Gabard

github.com/Donsam-Gabard

Donsam-Gabard

Overview Repositories Projects Packages Stars

Popular repositories

You don't have any public repositories yet.

Customize your pins

1 contribution in the last year

Contribution settings 2025

Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct

Mon Wed Fri

Learn how we count contributions Less More

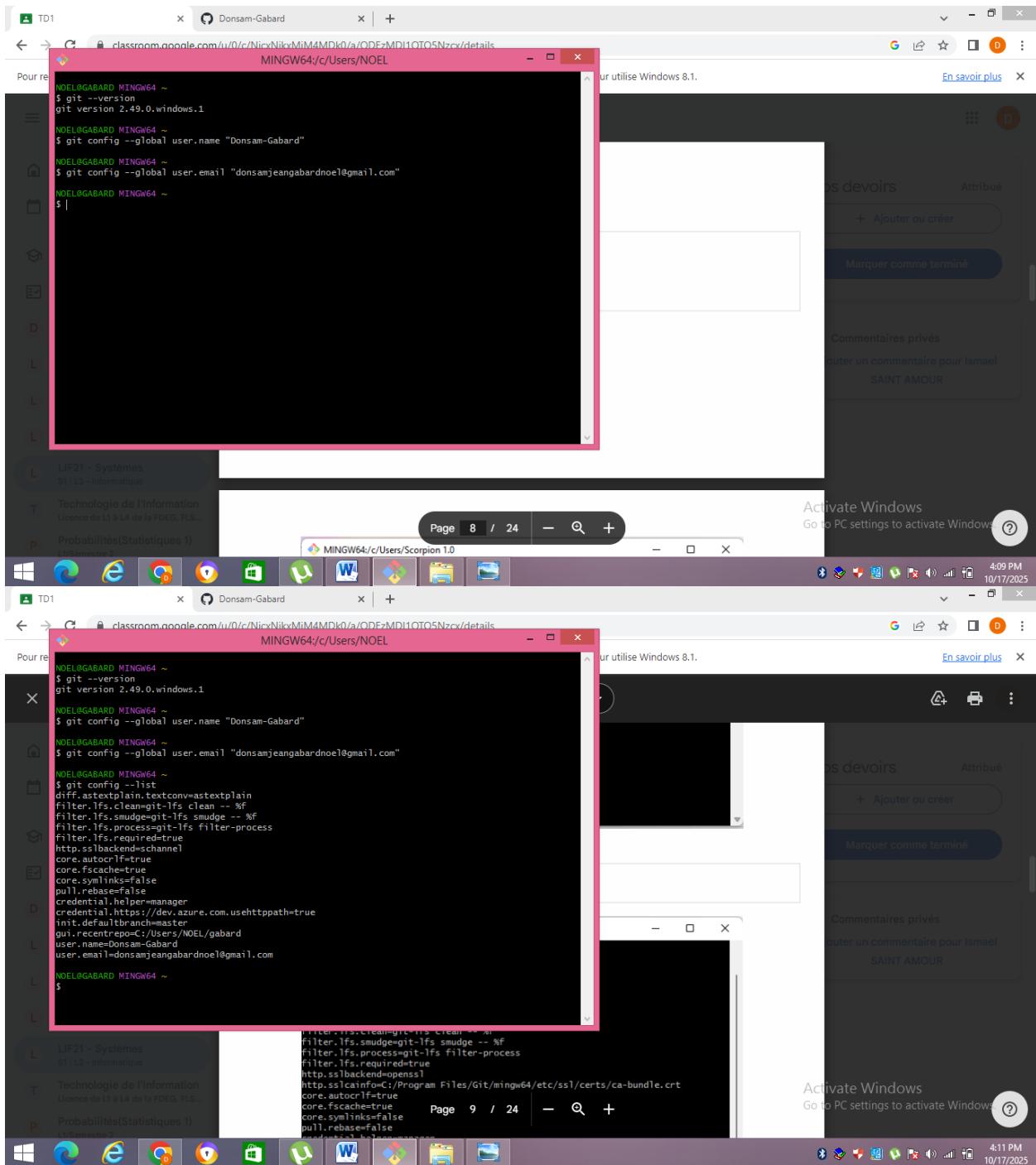
This is your **contribution graph**. Your first square is for joining GitHub and you'll earn more as you make [additional contributions](#). More contributions means a higher contrast square color for that day. Over time, your chart might start looking [something like this](#).

We have a quick guide that will show you how to create your first repository and earn more green squares! Go to PC settings to activate Windows.

Read the Hello World guide

Windows taskbar: 4:03 PM 10/17/2025

## ❖ Configuration de Git



```
NOEL@GABARD MINGW64 ~
$ git --version
git version 2.49.0.windows.1

NOEL@GABARD MINGW64 ~
$ git config --global user.name "Donsam-Gabard"

NOEL@GABARD MINGW64 ~
$ git config --global user.email "donsamjeangabardnoel@gmail.com"

NOEL@GABARD MINGW64 ~
$ |
```

```
NOEL@GABARD MINGW64 ~
$ git --version
git version 2.49.0.windows.1

NOEL@GABARD MINGW64 ~
$ git config --global user.name "Donsam-Gabard"

NOEL@GABARD MINGW64 ~
$ git config --global user.email "donsamjeangabardnoel@gmail.com"

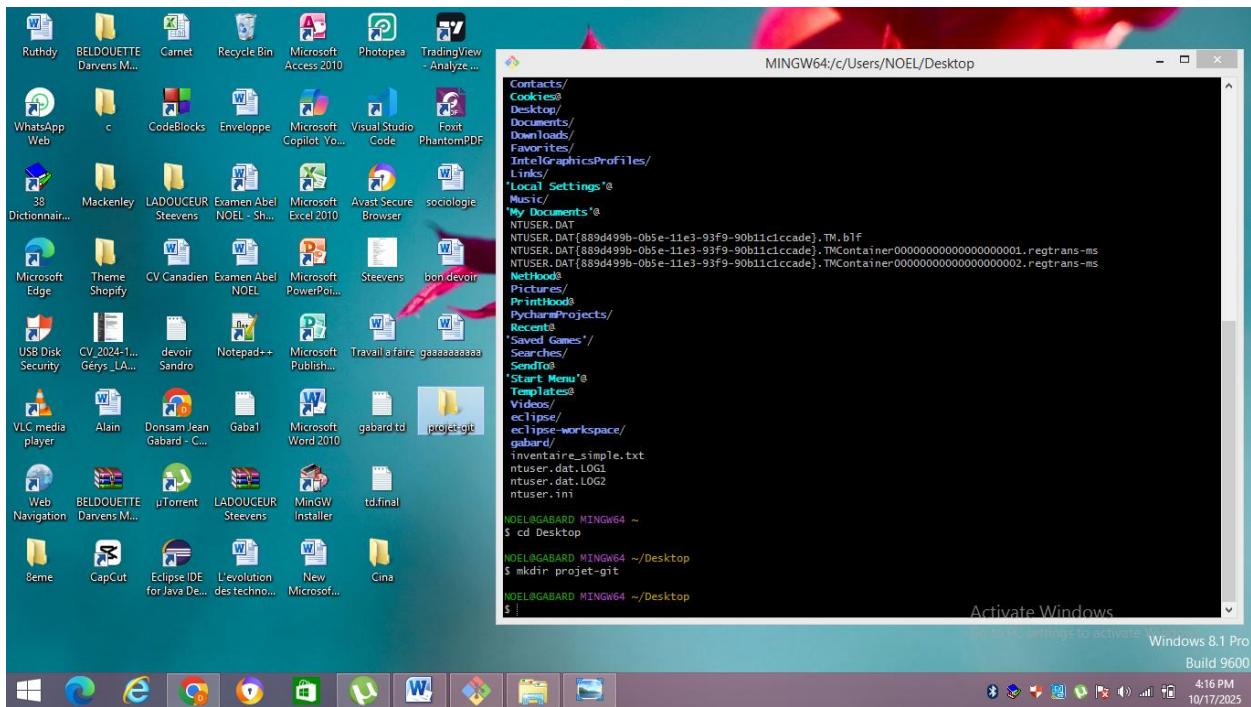
NOEL@GABARD MINGW64 ~
$ git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=schannel
core.autocrlf=true
core.fscache=true
core.ignorecase=true
pull.rebase=false
credential.helper=manager
credential.azure=https://dev.azure.com/usehttppath=true
init.defaultbranch=master
gui.recentrepo=c:/Users/NOEL/gabard
user.name=Donsam-Gabard
user.email=donsamjeangabardnoel@gmail.com

NOEL@GABARD MINGW64 ~
```

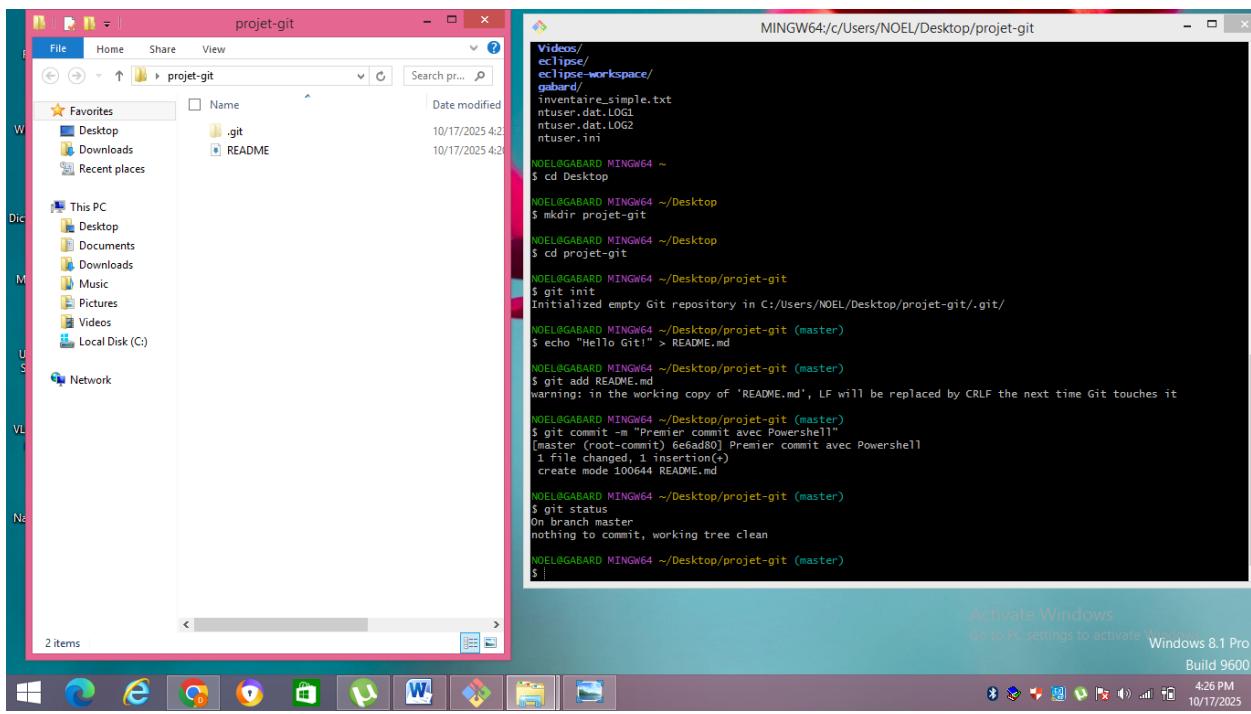
## ❖ Testons Git avec PowerShell :

- *Créons un dossier de test :*

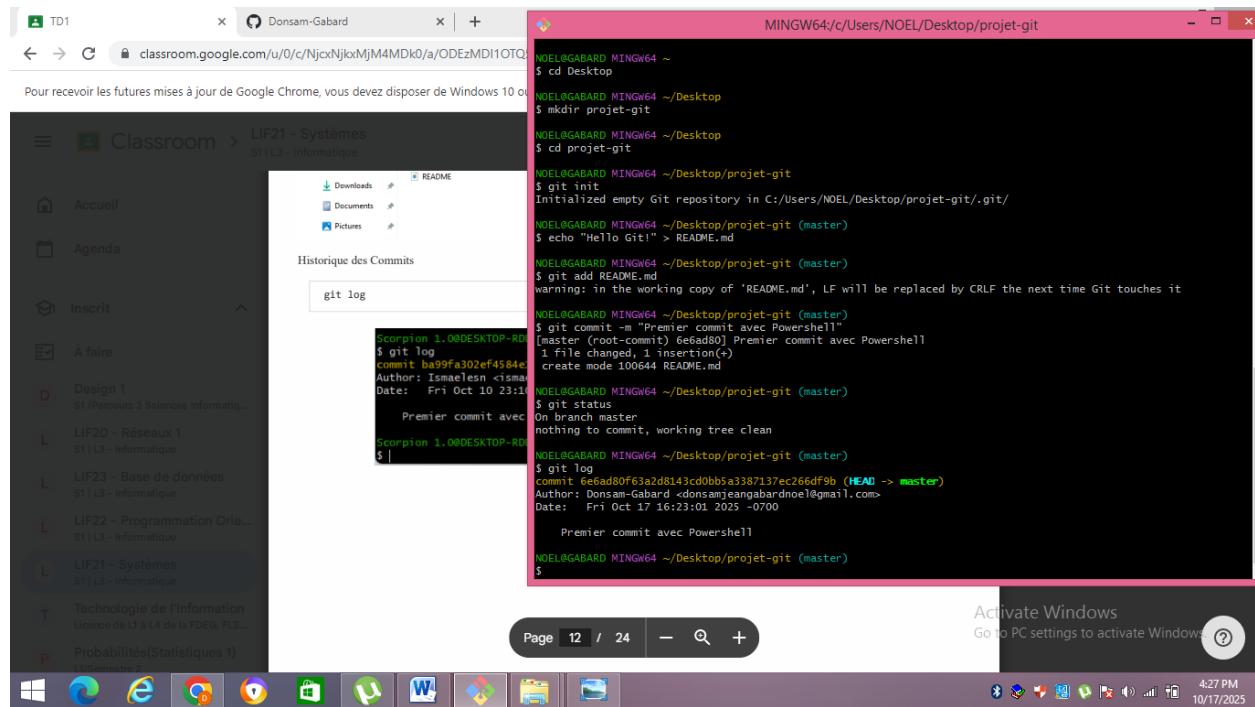
A screenshot of a Windows desktop environment. At the top, there are two browser windows open in Google Chrome. The left window shows a command-line interface (CMD) with the user's home directory as the working directory. The right window shows a Google Classroom assignment titled "TD1". The taskbar at the bottom contains icons for various applications, including Microsoft Word, Excel, and File Explorer. The system tray shows the date and time as 10/17/2025 at 4:14 PM.



- Initialisons un dépôt et créons un fichier :



- Historique des commits :



## ❖ Générons une nouvelle clé SSH :

The screenshot shows a Windows desktop environment. On the left, there is a Google Classroom assignment titled "LIF21 - Systèmes". The assignment content includes a text block with instructions for generating an SSH key, a list of points for generating a key pair, and a step-by-step guide for using the ssh-keygen command. On the right, a terminal window titled "MINGW64:/c/Users/NOEL/Desktop/projet-git" is open, displaying the command-line process of generating an RSA key pair. The terminal output shows the creation of a new file "README.md", the status of the branch "master" (nothing to commit), and the execution of the ssh-keygen command with options "-t ed25519" and "-C "ton.email". The terminal also displays the generated key fingerprint and the saved public key path. The taskbar at the bottom shows various icons for Microsoft Office applications like Word, Excel, and PowerPoint.

```
1 file changed, 1 insertion(+)
create mode 100644 README.md

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

NOEL@GABARD MINGW64 ~/Desktop/projet-git (master)
$ git add .
commit 666ad80f63a2d8143cd0bb5a3387137ec266df9b (HEAD -> master)
Author: Donsam-Gabard <donsanjeangabardnoel@gmail.com>
Date:   Fri Oct 17 16:23:01 2025 -0700

    Premier commit avec PowerShell

NOEL@GABARD MINGW64 ~/Desktop/projet-git (master)
$ ssh-keygen -t rsa -b 4096 -C "donsanjeangabardnoel@gmail.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/NOEL/.ssh/id_rsa):
Enter passphrase for "/c/Users/NOEL/.ssh/id_rsa" (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/NOEL/.ssh/id_rsa
Your public key has been saved in /c/Users/NOEL/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:RXmlNodefBCEu91whDn05/uf9c8T4r6v6vDNJ5B6MNKUD0 dongsanjeangabardnoel@gmail.com
The key's randomart image is:
+---[RSA 4096]----+
| .oB0 |
| ..E+ |
| ..B..o |
| .+ +o+ |
| S + +..o |
| . .o.. |
| . .+o |
| .++=X |
+---[SHA256]----+
NOEL@GABARD MINGW64 ~/Desktop/projet-git (master)
$ |
```

The screenshot shows a dual-monitor setup. The left monitor displays a Windows desktop environment with pinned icons for Accueil, Agenda, Inscrit, À faire, Design 1, LIF20 - Réseaux 1, LIF23 - Base de données, LIF22 - Programmation Orientée Objet, LIF21 - Systèmes, Technologie de l'Information, Probabilités (statistiques) 1, and Classroom. The right monitor displays a Linux terminal window titled 'MINGW64/c/Users/NOEL/Desktop/projet-git'. The terminal shows the user attempting to generate and copy an RSA public key. The process involves running commands like 'cat ~./ssh/id\_ed25519', 'cat ~./ssh/id\_rsa', and 'cat ~./ssh/id\_rsa.pub'. The user then copies the output to the clipboard using 'ctrl + c' and pastes it into the terminal using 'ctrl + v'. A tooltip from the terminal window says 'Copiez la clé affichée dans le terminal.' (Copy the displayed key into the terminal.) Below the terminal, a status bar shows 'MINGW64/c/Users/NOEL/Desktop/projet-git' and the current page number 'Page 14 / 24'. The bottom of the screen features a taskbar with various application icons.

- Copions la clé affichée dans le terminal :

TD1 Add new SSH key

github.com/settings/ssh/new

Settings Donsam-Gabard (Donsam-Gabard) 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

## Add new SSH Key

Title Clé Windows

Key type Authentication Key

Key

```
ssh-rsa AAAAB3NzaC1yc2EAAAQABAAQADojt+bEMbUuEDAKaYYsjxIK3QL3yRuBRuyBX6fFspY4eDMHjCkC8eDbI9RmAUA/yjeYBwanu0ZpQm0HQZ-bj9CdFgpAYCJD3bhsCvkh3hkYHw/IzrBaAlqboeH9+NEm5XEPH/p90RJpsfMzOnfmnfBuypkBlodhr/7tgWaB25yMq46COIAzTHPLLGxtCorndRMxxNVjsyKKM8QXDlilu412msyUIVQzMDM/4wgB/tzdDGFO99jvcPjVLtnQhvuPk/JE3CMaFTjATK+i+2WBpZnG13Xe+o k4/VnP7XuG4ja49RPfdovG6s5VOgQOId7u43ul/QnaTU5vMwUDmpjklpnlt+ndOpvax8r93ImfaAijcQ2jri/tvLBFPQchSSng3U8jmOgLsj/LajFaSemta3E+j7Gvg4x/Nyg4meL9kVTCntWv1EIC5LyPiWOxN94tTuhN43LYPSINoYe80B+AFOAvDOLBVFRv1DgLEH0Lrr3cAleh1RRYmxvrlzHMI5a35BuQjsPDDKMy9EYGT3bc9hh6UD5VxZskhdAyh4cRGihzr/pZwgBjZ0nsjD8lrpH//ecUtDbm6K/T8lvbmLagbyN7M2+XdYc8AT7g6Q6fxHx8x1903M4KzXqw6w2BvIzWw== dongsam-gabardnoel@gmail.com
```

Add SSH key

Activate Windows Go to PC settings to activate Windows.

TD1 SSH and GPG keys

github.com/settings/keys

Settings Donsam-Gabard (Donsam-Gabard) Your personal account Go to your personal profile

You have successfully added the key 'Clé Windows'.

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

 Cle Windows	SSH	SH256:RXuufBCEu91whDn05/u9c8T4r6vbVDN35B6WiiKUD0	Added on Oct 17, 2025	Never used — Read/write	<a href="#">Delete</a>
---	-----	--	-----------------------	-------------------------	------------------------

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

## GPG keys

New GPG key

Activate Windows Go to PC settings to activate Windows.

En attente de api.github.com... Generate a GPG key and add it to your account.

TD1 SSH and GPG keys

github.com/settings/keys

Settings

You have successfully added the key 'Clé Windows'.

Donsam-Gabard (Donsam-Gabard)  
Your personal account

Public profile Account Appearance Accessibility Notifications

Access Billing and licensing Emails Password and authentication Sessions

SSH and GPG 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  
SHA256: RXmUFBCEu91whDn05/uf9c8T4r6vbVDN35B6MWWKUD0  
Added on Oct 17, 2025  
Never used — Read/write

Delete

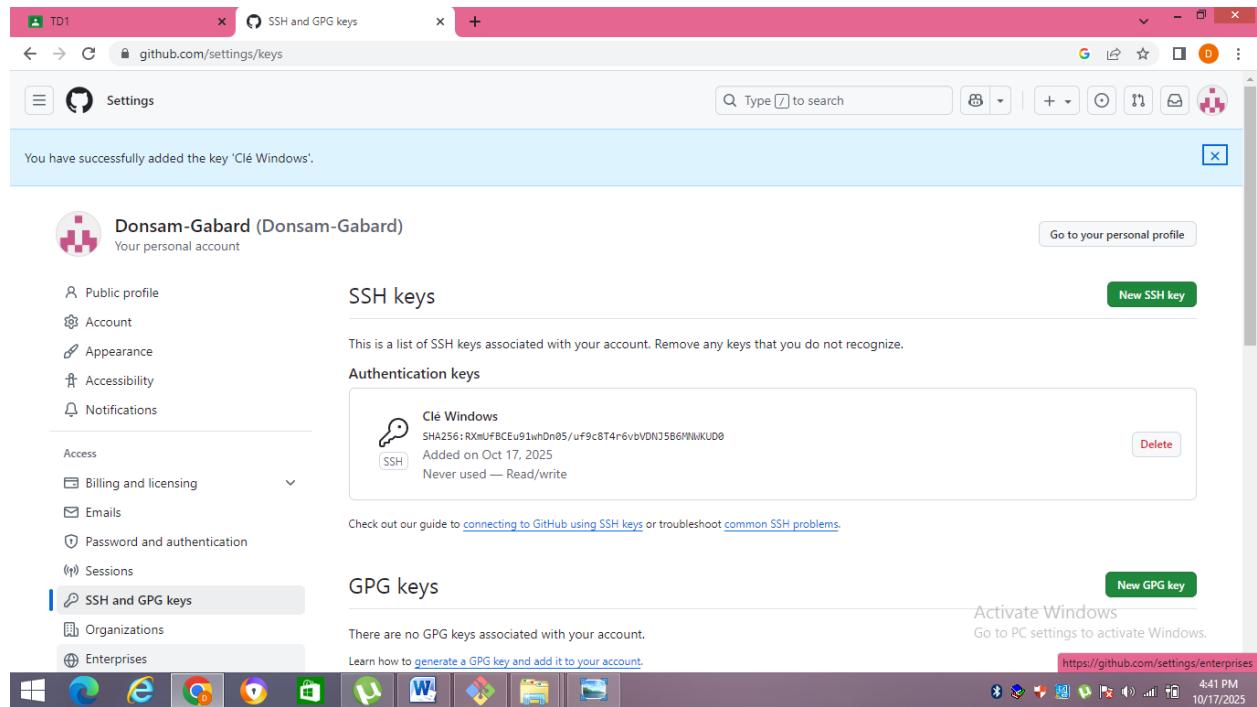
Check out our guide to [connecting to GitHub using SSH keys](#) or troubleshoot [common SSH problems](#).

GPG keys

New GPG key

Activate Windows  
Go to PC settings to activate Windows.  
<https://github.com/settings/enterprises>

4:41 PM  
10/17/2025



## ❖ Créons un dépôt GitHub :

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 and name **Donsam-Gabard** / **Repository name \*** **mon-projet**

Great repository names are short and memorable. How about [bookish-octo-succotash](#)?

Description

0 / 350 characters

2 Configuration

Choose visibility \* **Public**

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](#)

Activate Windows  
Go to PC settings to activate Windows.

4:43 PM 10/17/2025

TD1    New repository

github.com/new

**Repository name \***  
Owner: Donsam-Gabard / Mon-premier-projet  
Mon-premier-projet is available.

Great repository names are short and memorable. How about [bookish-octo-succotash?](#)

**Description**  
Laboratoire systèmes 1  
22 / 350 characters

**Configuration**

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

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

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

Add license  
Licenses explain how others can use your code. [About licenses](#)  
MIT License

Create repository

Activate Windows  
Go to PC settings to activate Windows.

TD1    Donsam-Gabard/Mon-premier-projet

github.com/Donsam-Gabard/Mon-premier-projet

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

**Mon-premier-projet** Public

main 1 Branch 0 Tags Go to file Add file Code About

Donsam-Gabard Initial commit f133532 · 1 minute ago 1 Commit

LICENSE Initial commit 1 minute ago

README MIT license

Add a README Help people interested in this repository understand your project by adding a README.  
Add a README

About Laboratoire systèmes 1

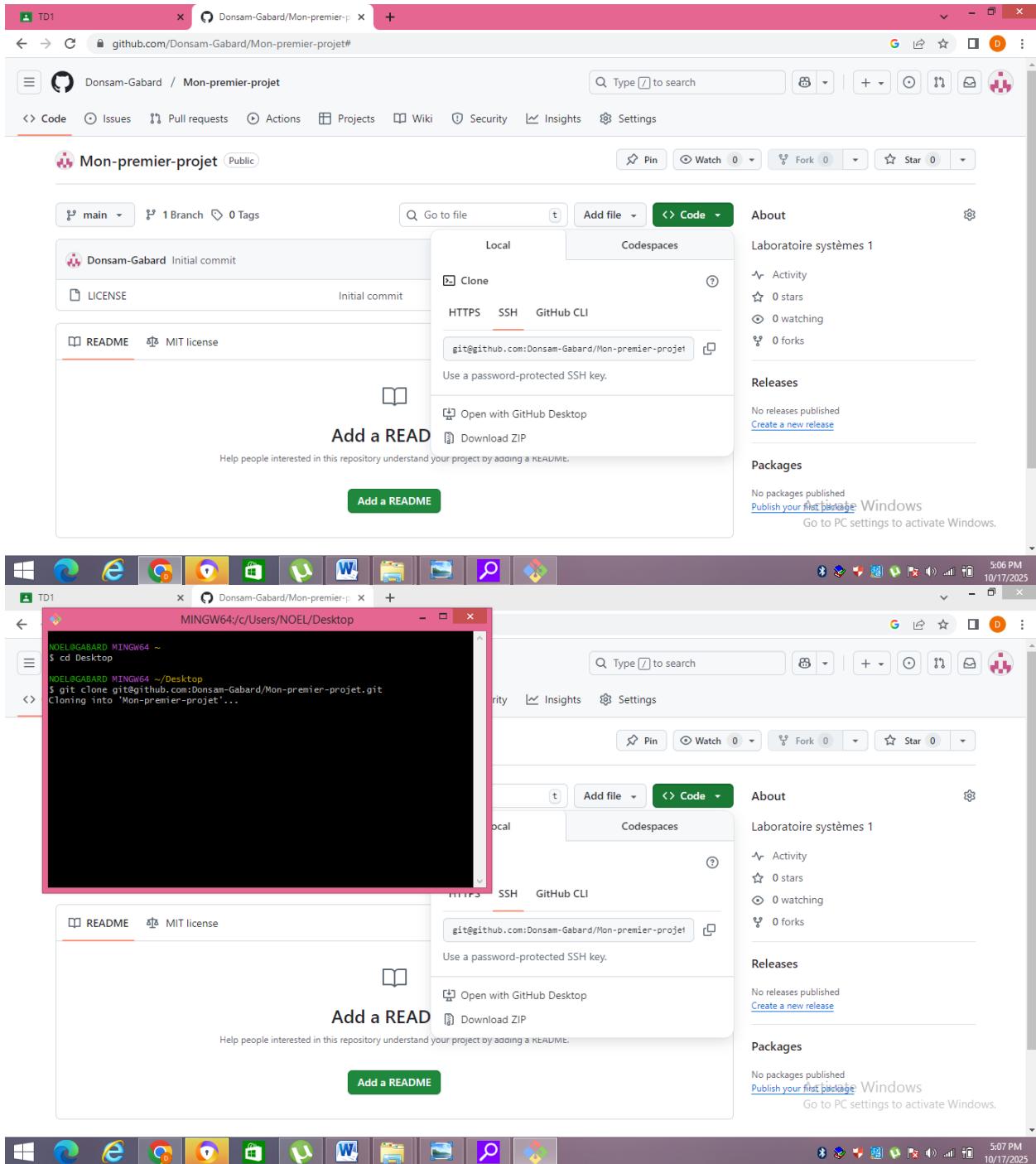
Activity 0 stars 0 watching 0 forks

Releases No releases published Create a new release

Packages No packages published Publish your first package

Activate Windows Go to PC settings to activate Windows.

## ❖ Clonons un dépôt GitHub via SSH :



A screenshot of a Windows desktop environment. In the foreground, a terminal window titled 'MINGW64' is open, showing the command \$ git clone git@github.com:Donsam-Gabard/Mon-premier-projet.git and its output, which includes a host key verification error. Below the terminal is a GitHub repository page for 'Donsam-Gabard/Mon-premier-projet'. The repository has 0 stars, 0 forks, and 1 commit. A 'Add a README' button is visible on the repository page.

A second screenshot of a Windows desktop environment, identical to the first one. It shows the same terminal window with the host key verification error and the same GitHub repository page for 'Donsam-Gabard/Mon-premier-projet'. The repository details and the 'Add a README' button are also present.



A screenshot of a GitHub repository page for 'Donsam-Gabard/Mon-premier-projet'. The repository has 1 star, 0 forks, and 0 releases. The code tab is selected, showing a terminal window with the following command and output:

```
NOEL@GABARD MINGW64 ~
$ cd Desktop
$ git clone https://github.com:Donsam-Gabard/Mon-premier-projet.git
Cloning into 'Mon-premier-projet'.
The authenticity of host 'github.com (140.82.112.4)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvv6TuJhbhpZisF/zLDA0zPMsvHdkr4UvCoQu.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
remote: Enumerating objects: 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.
```

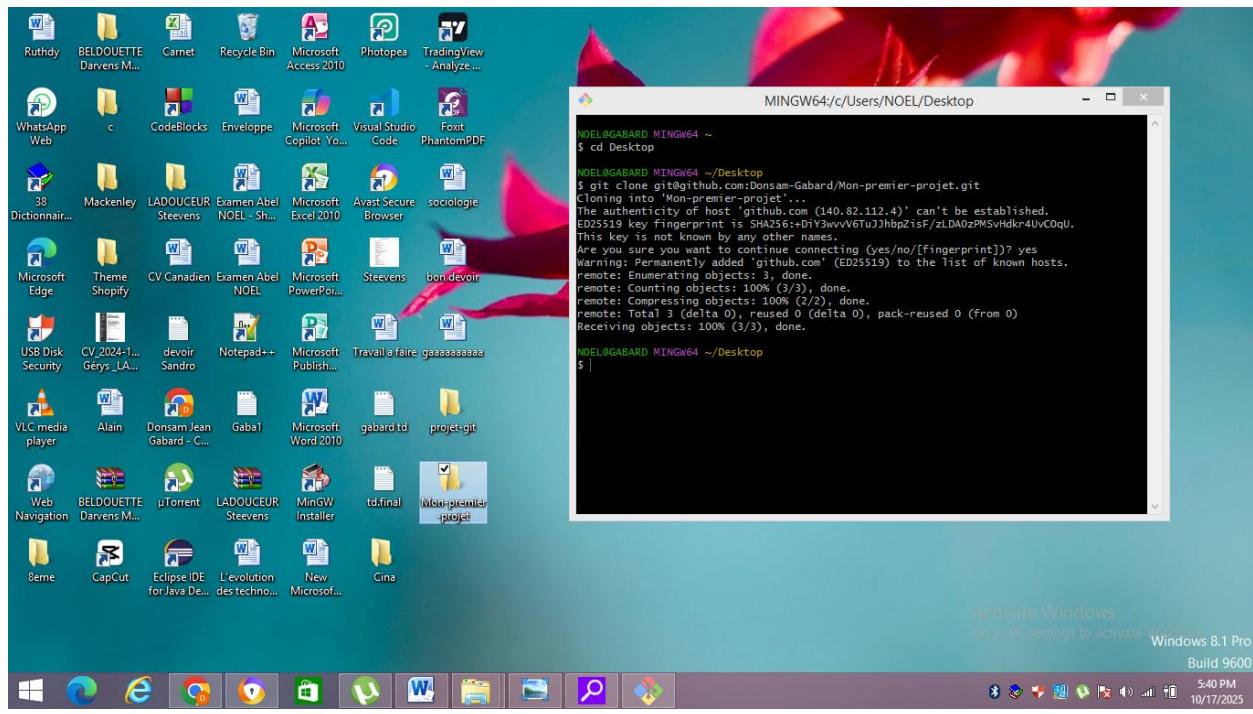
The GitHub interface includes a 'Codepaces' button, a 'About' section with 'Laboratoire systèmes 1' and 'MIT license', and a 'Packages' section with 'Activate Windows' instructions.

A screenshot of a GitHub repository page for 'Donsam-Gabard/Mon-premier-projet'. The repository has 1 star, 0 forks, and 0 releases. The code tab is selected, showing a terminal window with the following command and output:

```
NOEL@GABARD MINGW64 ~
$ cd Desktop
$ git clone https://github.com:Donsam-Gabard/Mon-premier-projet.git
Cloning into 'Mon-premier-projet'.
The authenticity of host 'github.com (140.82.112.4)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvv6TuJhbhpZisF/zLDA0zPMsvHdkr4UvCoQu.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
remote: Enumerating objects: 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.
```

The GitHub interface includes a 'Codepaces' button, a 'About' section with 'Laboratoire systèmes 1' and 'MIT license', and a 'Packages' section with 'Activate Windows' instructions.





## Exercice 2

❖ Créons un nouveau dépôt GitHub, « TD » :

TD1    New repository

github.com/new

General

Owner and name  
Donsam-Gabard / TD  
TD is available.

Repository name \* TD

Great repository names are short and memorable. How about [bookish-octo-couscous?](#)

Description

0 / 350 characters

2 Configuration

Choose visibility \* Public

Add README On

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

Add .gitignore No .gitignore

.gitignore tells git which files not to track. [About ignoring files](#)

Add license MIT License

Licenses explain how others can use your code. [About licenses](#)

Create repository

Activate Windows  
Go to PC settings to activate Windows.

D1    Donsam-Gabard / TD

github.com/Donsam-Gabard/TD

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

TD Public

main 1 Branch 0 Tags

Go file Add file Code

Donsam-Gabard Initial commit 1499aa9 · now 1 Commit

LICENSE Initial commit now

README.md Initial commit now

README MIT license

TD

About

No description, website, or topics provided.

Readme Activity 0 stars 0 watching 0 forks

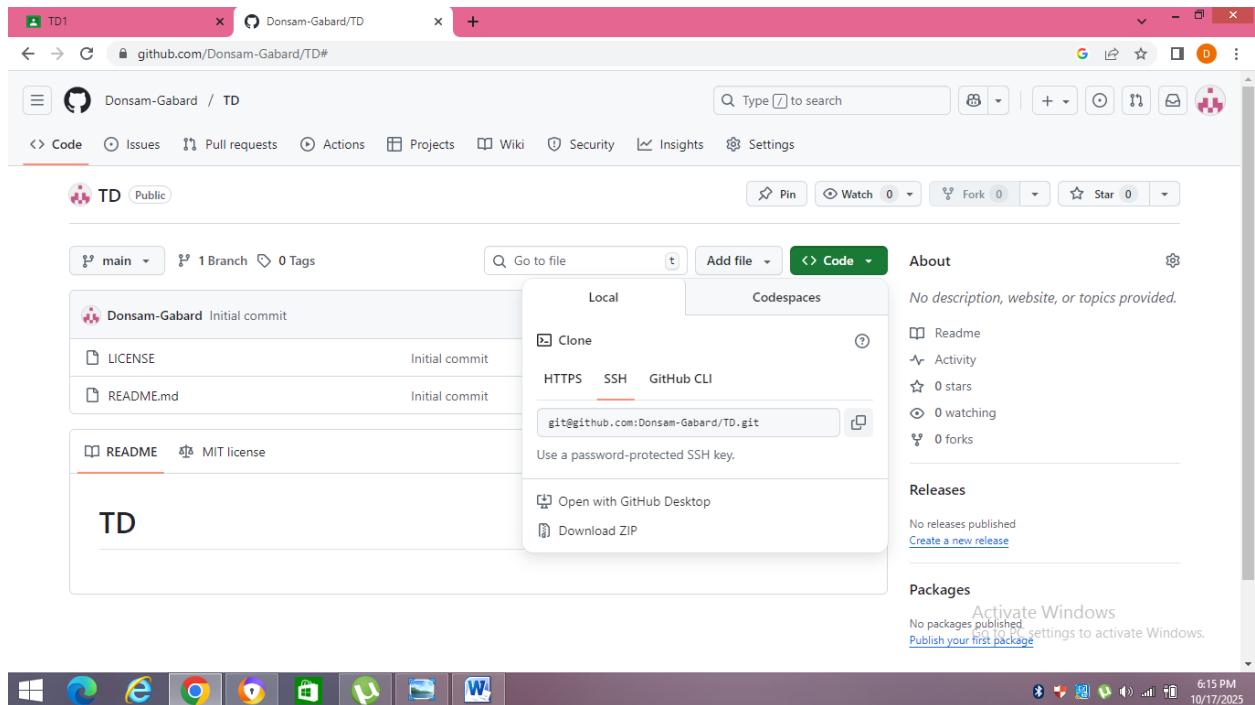
Releases

No releases published Create a new release

Packages

Activate Windows  
No packages published Go to PC settings to activate Windows.  
Publish your first package

6:14 PM 10/17/2025



- Clonons-le sur le bureau.....

The screenshot shows a GitHub repository page for 'Mon-premier-projet'. A terminal window is open in the browser, displaying the command \$ git clone git@github.com:Donsam-Gabard/Mon-premier-projet.git and its output 'Cloning into 'Mon-premier-projet'...'. The repository details on the right include 'About' (Laboratoire systèmes 1), 'Activity' (0 events), 'Stars' (0), 'Watching' (0), and 'Forks' (0). Below the repository details, sections for 'Releases' (No releases published) and 'Packages' (No packages published) are shown. A 'README' file is visible on the left, and a 'Code' tab is selected at the top of the repository view.

The screenshot shows a Windows desktop environment. In the foreground, a terminal window titled 'MINGW64:/c/Users/NOEL/Desktop' is open, displaying a command-line session where a user is cloning a GitHub repository. The session includes a warning about host key verification and a fatal error message. Below the terminal, a GitHub repository page for 'Donsam-Gabard/Mon-premier-projet' is visible, showing basic repository details like 'About', 'Activity', and 'Releases'. A context menu is open over the repository page, with options like 'Open with GitHub Desktop' and 'Download ZIP'. At the bottom of the screen, there's a navigation bar with links for 'Add a README', 'Help people interested in this repository understand your project by adding a README.', and 'Add a README' button.

The screenshot shows a GitHub repository page for 'Mon-premier-projet'. The repository has 0 stars and 0 forks. It features a 'Code' tab, a 'Codespaces' section, an 'About' section with 'Laboratoire systèmes 1' and 'MIT license', and a 'Releases' section with a note about activating Windows. A terminal window on the left shows the command \$ git clone git@github.com:Donsam-Gabard/Mon-premier-projet.git being run in a MINGW64 environment.

GitHub repository page for 'Mon-premier-projet'.

Codepaces

About

Laboratoire systèmes 1

MIT license

Activity

0 stars

0 watching

0 forks

Releases

No releases published

Create a new release

Packages

Activate Windows

No packages published

Go to PC settings to activate Windows.

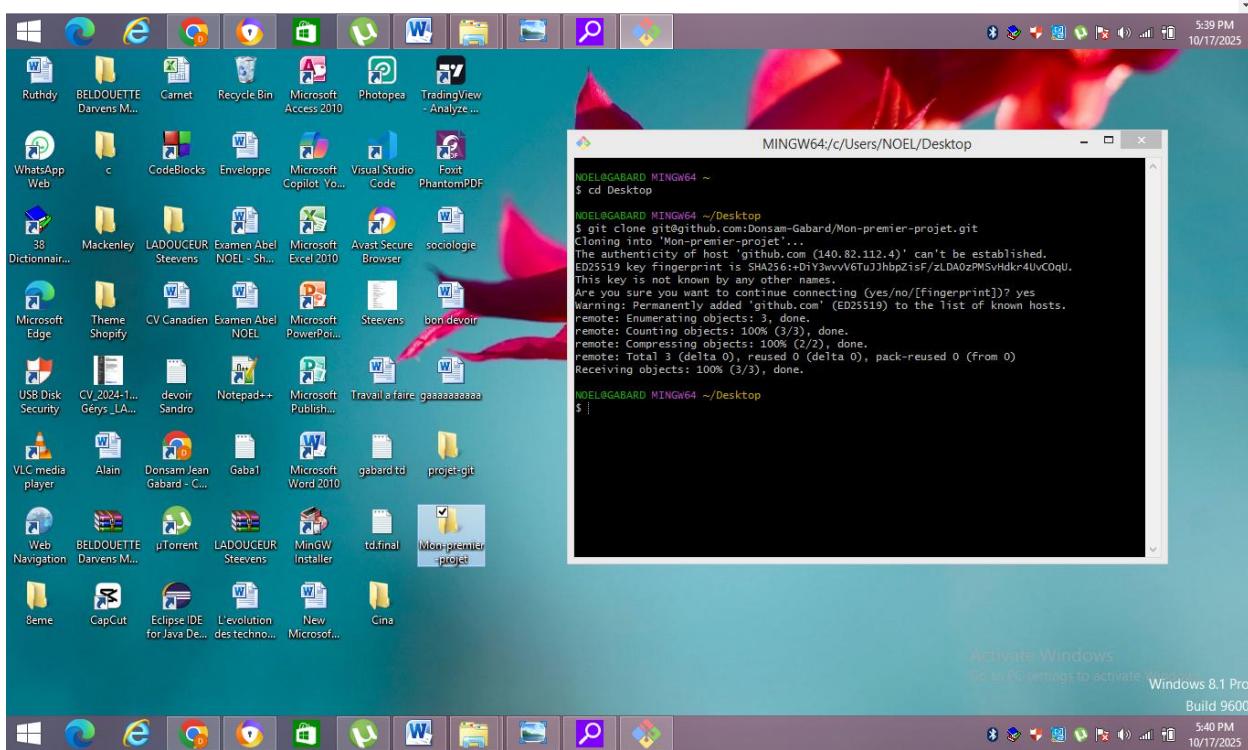
Publish your first package

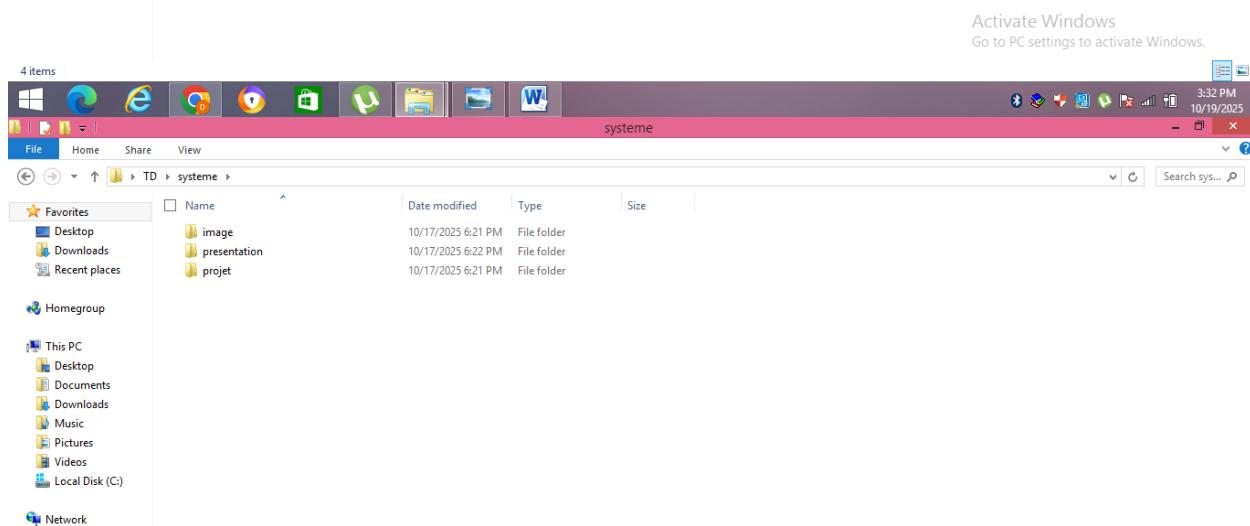
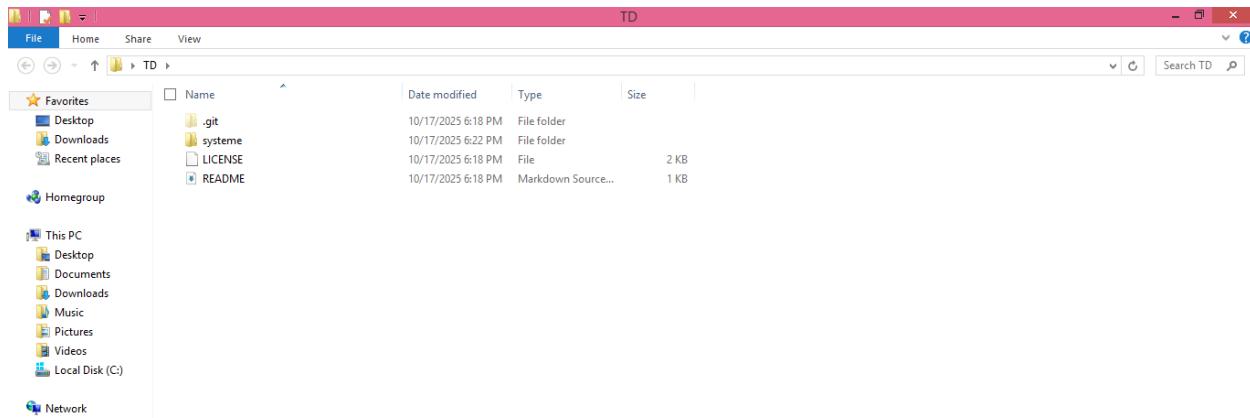
Add a README

Download ZIP

Help people interested in this repository understand your project by adding a README.

Add a README





## ❖ Conclusion

Ce TD m'a permis de me familiariser avec Git (dépôt local) et GitHub (dépôt distant). J'ai appris comment vérifier l'installation de Git sur mon pc et comment créer un compte GitHub et le configurer avec Git. Comment créer et ouvrir des dossiers sur Git. La création : d'une nouvelle clé SSH, de nouveau dépôt sur GitHub et le clonage de ces dépôts sur Git via la cle SSH. Ce TD m'a surtout appris comment héberger, partager et travailler sur un projet a distant via GitHub, la manière dont je vais travailler avec d'autres collègues, rendre mes laboratoires d'informatiques en créant des dépôts publiques qui vont me permettre d'avancer beaucoup plus rapidement dans le domaine informatique.

NB : Veuillez m'excuser pour la qualité de mes captures d'écran que je n'ai pas pu améliorer en raison de la baisse performance de mon ordinateur, malgré tout je veux avancer dans ce cours et j'espère que vous m'en tiendrez pas rigueur.

Merci de votre compréhension !