



جامعة أم القرى
UMM AL-QURA UNIVERSITY

أدوات تطوير البرمجيات

Git Helper Project Report

Section: 3

Group 5:

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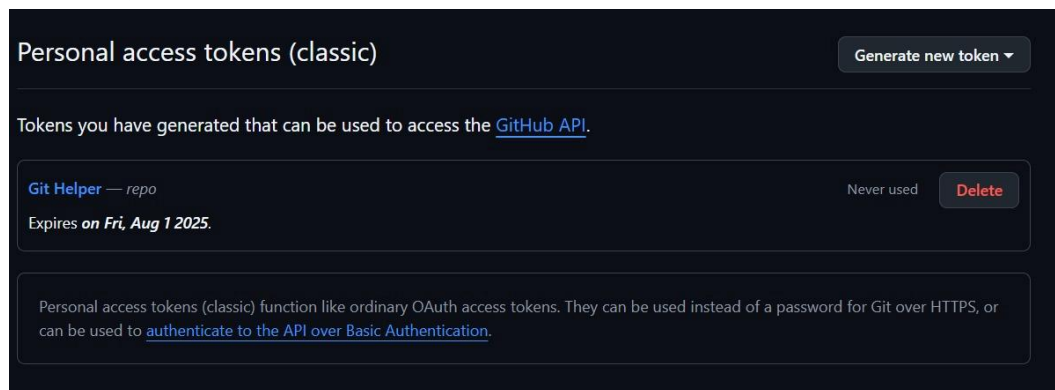
Introduction

This project aims to automate the process of creating and initializing Git repositories and pushing them to GitHub using a simple Bash script. The script provides a straightforward approach to setting up project directories, adding files to the staging area, committing changes, and linking local repositories to remote GitHub repositories.

Verifying Installation of Git and GitHub CLI

```
azzam72@azzam72-VMware-Virtual-Platform:~$ git --version
git version 2.45.2
azzam72@azzam72-VMware-Virtual-Platform:~$ gh --version
gh version 2.46.0 (2024-11-20 Ubuntu 2.46.0-1ubuntu0.2)
https://github.com/cli/cli/releases/tag/v2.46.0
```

Creating a Personal Access Token (PAT) on GitHub



Personal access tokens (classic) Generate new token ▾

Tokens you have generated that can be used to access the [GitHub API](#).

Repository	Usage	Expiration	Actions
Git Helper — repo	Never used	Expires on Fri, Aug 1 2025.	Delete

Personal access tokens (classic) function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to [authenticate to the API over Basic Authentication](#).

Setting Up the Project Directory and Files

```
azzam72@azzam72-VMware-Virtual-Platform:~$ mkdir Git_Helper
azzam72@azzam72-VMware-Virtual-Platform:~$ cd Git_Helper
azzam72@azzam72-VMware-Virtual-Platform:~/Git_Helper$ touch script.sh
azzam72@azzam72-VMware-Virtual-Platform:~/Git_Helper$ chmod +x script.sh
azzam72@azzam72-VMware-Virtual-Platform:~/Git_Helper$ nano script.sh
```

Writing the Script using Nano

```
#!/bin/bash

echo "Initializing Git project..."
git init

echo "Creating README.md"
echo "# Git Helper" > README.md

echo "Adding files to staging area..."
git add .

echo "Making first commit..."
git commit -m "Initial commit"

echo "Enter your GitHub repository URL:"
read repo_url

echo "Adding remote origin..."
git remote add origin "$repo_url"

echo "Pushing to GitHub..."
git branch -M main
git push -u origin main

echo "✅ Done. Project pushed successfully."
```

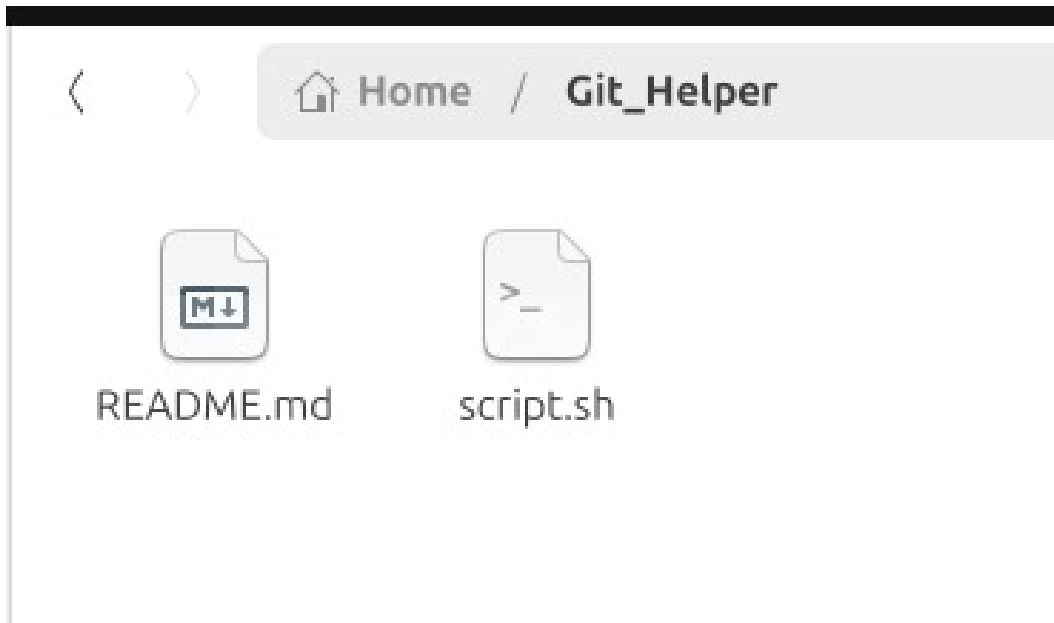
Running the Script and Verifying the Results

```
azzam72@azzam72-VMware-Virtual-Platform:~/Git_Helper$ ./script.sh
Initializing Git project...
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/azzam72/Git_Helper/.git/
Creating README.md
Adding files to staging area...
Making first commit...
[master (root-commit) ea86aed] Initial commit
 2 files changed, 26 insertions(+)
   create mode 100644 README.md
   create mode 100755 script.sh
Enter your GitHub repository URL:
https://github.com/AMT72/GH_Project.git
Adding remote origin...
Pushing to GitHub...
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 2 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 530 bytes | 88.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/AMT72/GH_Project.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
✔ Done. Project pushed successfully.
```

Verifying the Results on GitHub

The screenshot shows the GitHub interface for a repository named 'GH_Project' (Public). The repository has 1 branch (main) and 0 tags. The commit history shows an initial commit by user 'AMT72' 2 minutes ago, with 1 commit. The commit details show two files: 'README.md' and 'script.sh', both added in the initial commit. The README file is visible, showing the title 'Git Helper'.

Verifying Local Directory Files



Conclusion

The project was successfully created and pushed to GitHub using the script. This approach simplifies project management and reduces the time required for basic setup tasks.