

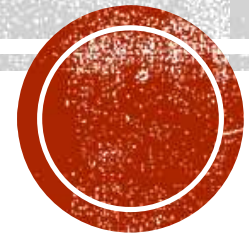
DEVOPS

Assignment 1

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SUBVERSION

■ Installation

To install Subversion (SVN) on Ubuntu, use the following command:

```
sudo apt updatesudo  
sudo apt install subversion
```

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ sudo apt update  
sudo apt install subversion  
[sudo] password for ubuntu11:  
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease  
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease  
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]  
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease  
Fetched 126 kB in 2s (54.0 kB/s)  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
21 packages can be upgraded. Run 'apt list --upgradable' to see them.  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
subversion is already the newest version (1.14.3-1build4).  
The following package was automatically installed and is no longer required:  
  libllvm17t64  
Use 'sudo apt autoremove' to remove it.  
0 upgraded, 0 newly installed, 0 to remove and 21 not upgraded.  
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$
```



■ Creating an SVN Repository

Create the repository directory; To create an SVN repository; Edit the configuration file;

```
sudo mkdir -p /var/svn/repos;
```

```
sudo svnadmin create /var/svn/repos/myrepo;
```

```
sudo nano /var/svn/repos/myrepo/conf/svnserve.conf
```

```
Processing triggers for libc-bin (2.39-0ubuntu8.5) ...  
Processing triggers for man-db (2.12.0-4build2) ...  
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ sudo mkdir -p /var/svn/repos  
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ sudo svnadmin create /var/svn/repos/myrepo  
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ sudo nano /var/svn/repos/myrepo/conf/svnserve.conf  
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ sudo nano /var/svn/repos/myrepo/conf/svnserve.conf  
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$
```

CONFIG PASSWORD:

```
/home/ubuntu11/svn_repo/my_project/conf/passwd  
### This file is an example password file for svnserve.  
### Its format is similar to that of svnserve.conf. As shown in  
### example below it contains one section labelled [users].  
### The name and password for each user follow, one account per  
  
[users]  
ishika = ubuntu  
sujay = ubuntu  
# harry = harryssecret  
# sally = sallyssecret
```



SERVER CONFIG:

```
/home/ubuntu11/svn_repo/my_project/conf/svnserve.conf
### This file controls the configuration of the svnserve daemon>
### use it to allow access to this repository. (If you only al>
### access through http: and/or file: URLs, then this file is>
### irrelevant.)

### Visit http://subversion.apache.org/ for more information.

[general]

anon-access = none
auth-access = write
password-db = passwd
### The anon-access and auth-access options control access to t>
### repository for unauthenticated (a.k.a. anonymous) users and>
### authenticated users, respectively.
### Valid values are "write", "read", and "none".
### Setting the value to "none" prohibits both reading and writ>
### "read" allows read-only access, and "write" allows complete>
### read/write access to the repository.
### The sample settings below are the defaults and specify that>
### users have read-only access to the repository, while authen>
### users have read and write access to the repository.
# anon-access = read
# auth-access = write
### The password-db option controls the location of the password>
### database file. Unless you specify a path starting with a /,>
### the file's location is relative to the directory containing>
### this configuration file.
### If SASL is enabled (see below), this file will NOT be used.
### Uncomment the line below to use the default password file.
# password-db = passwd
### The authz-db option controls the location of the authorizat>
### rules for path-based access control. Unless you specify a >

[ Read 85 lines ]

^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify
```



Adding and Committing Files: `svn add file.txt`
To commit changes: `svn commit -m "Added test.txt"`

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ cd /mnt/c/Users/ISHIKA/myrepo
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/myrepo$ echo "Hello SVN" > test.txt
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/myrepo$ svn add test.txt
A          test.txt
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/myrepo$ svn commit -m "Added test.txt"
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

Adding          test.txt
Transmitting file data .done
Committing transaction...
Committed revision 1.
```



```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/myrepo$ svn status
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/myrepo$ svn update
Updating '.':
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

At revision 1.
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/myrepo$ svn status
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/myrepo$ svn log
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

-----
r1 | ishika | 2025-02-15 12:29:15 +0000 (Sat, 15 Feb 2025) | 1 line
Added test.txt
-----
```



- Check the server working in SVN

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ ps aux | grep svns
erve
ubuntu11      484  0.0  0.0  16580  2724 ?        Ss   12:09   0:
00 svnserve -d -r /home/ubuntu11/svn_repo
ubuntu11      571  0.0  0.0   4096  2024 pts/0    S+   12:14   0:
00 grep --color=auto svnserve
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ svn checkout svn:/
/localhost/my_project /mnt/c/Users/ISHIKA/myrepo
Checked out revision 0.
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA$ |
```



CREATING TRUNK

```
ubuntu11@DESKTOP-GLIB608:~/svn_repo/my_project$ svn mkdir svn://localhost/my_project/trunk -m "Creating trunk"
svn mkdir svn://localhost/my_project/branches -m "Creating branches"
svn mkdir svn://localhost/my_project/tags -m "Creating tags"
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

Committing transaction...
Committed revision 2.
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

Committing transaction...
Committed revision 3.
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

Committing transaction...
Committed revision 4.

ubuntu11@DESKTOP-GLIB608:~/svn_repo/my_project$ svn copy svn://localhost/my_project/trunk svn://localhost/my_project/branches/feature-x -m "Creating feature-x branch"
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

Committing transaction...
Committed revision 5.
ubuntu11@DESKTOP-GLIB608:~/svn_repo/my_project$ svn checkout svn://localhost/my_project/branches/feature-x /mnt/c/Users/ISHIKA/feature-x
cd /mnt/c/Users/ISHIKA/feature-x
Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ishika': *****

Authentication realm: <svn://localhost:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Username: sujay
Password for 'sujay': *****

Checked out revision 5.
```



LISTING SVN PROPERTIES

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x$ svn list svn://172.18.155.196/my_project
Authentication realm: <svn://172.18.155.196:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Password for 'ubuntu11': *****
```

```
Authentication realm: <svn://172.18.155.196:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Username: shreya
Password for 'shreya': *****
```

```
Authentication realm: <svn://172.18.155.196:3690> 23b19fd5-a946-43b5-9d88-f662ec5317ee
Username: ishika
Password for 'ishika ': *****
```

```
branches/
tags/
test.txt
trunk/
```



INTRODUCTION TO MERCURIAL

sudo apt install mercurial

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIWA/feature-x$ sudo apt-get install mercurial
[sudo] password for ubuntu11:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libllvm17t64
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  mercurial-common
Suggested packages:
  kdiff3 | kdiff3-qt | kompare | meld | tkcvs | mgdiff qct
  python3-mysqldb wish
The following NEW packages will be installed:
  mercurial mercurial-common
0 upgraded, 2 newly installed, 0 to remove and 21 not upgraded.
Need to get 3283 kB of archives.
After this operation, 16.3 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 mercurial amd64 6.7.2-1ubuntu2.2 [328 kB]
Fetched 3283 kB in 16s (207 kB/s)
Selecting previously unselected package mercurial-common.
(Reading database ... 47847 files and directories currently installed.)
Preparing to unpack .../mercurial-common_6.7.2-1ubuntu2.2_all.deb ...
Unpacking mercurial-common (6.7.2-1ubuntu2.2) ...
Selecting previously unselected package mercurial.
Preparing to unpack .../mercurial_6.7.2-1ubuntu2.2_amd64.deb ...
Unpacking mercurial (6.7.2-1ubuntu2.2) ...
Setting up mercurial-common (6.7.2-1ubuntu2.2) ...
Setting up mercurial (6.7.2-1ubuntu2.2) ...

Creating config file /etc/mercurial/hgrc.d/hgext.rc with new version
Processing triggers for man-db (2.12.0-4build2) ...
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIWA/feature-x$
```



To create a new repository:

```
hg init my_project
```

To add a file to Mercurial:

```
hg add file.txt
```

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x$ hg init my_project
```

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x$ cd my_project
```

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ echo "Hello, Mercurial!" > file.txt
```

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ hg add file.txt
```

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ svn add file.txt
```

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ svn commit -m "Added file.txt"
```



```

git config --global user.email 'ISHIKA100100@gmail.com'
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ git branch
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ git branch -M main
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ git remote remove origin
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ git remote add origin https://github.com/Is-hika/my_project.git
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ git add .
git commit -m "Initial commit"
[main (root-commit) e6c7d3a] Initial commit
25 files changed, 21 insertions(+)
create mode 100644 file.txt
create mode 100644 my_project/.hg/00changelog.i
create mode 100644 my_project/.hg/branch
create mode 100644 my_project/.hg/cache/branch2-served
create mode 100644 my_project/.hg/cache/rbc-names-v1
create mode 100644 my_project/.hg/cache/rbc-revs-v1
create mode 100644 my_project/.hg/dirstate
create mode 100644 my_project/.hg/last-message.txt
create mode 100644 my_project/.hg/requires
create mode 100644 my_project/.hg/store/00changelog.d
create mode 100644 my_project/.hg/store/00changelog.i
create mode 100644 my_project/.hg/store/00manifest.i
create mode 100644 my_project/.hg/store/data/file.txt.i
create mode 100644 my_project/.hg/store/fncache
create mode 100644 my_project/.hg/store/phaseroots
create mode 100644 my_project/.hg/store/requires
create mode 100644 my_project/.hg/store/undo
create mode 100644 my_project/.hg/store/undo.backupfiles
create mode 100644 my_project/.hg/undo.backup.branch.bck
create mode 100644 my_project/.hg/undo.backup.dirstate.bck
create mode 100644 my_project/.hg/undo.desc
create mode 120000 my_project/.hg/wcache/checklink
create mode 100644 my_project/.hg/wcache/checklink-target
create mode 100644 my_project/.hg/wcache/manifestfulltextcache
create mode 100644 my_project/file.txt
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ git push -u origin main

```



`.cd /mnt/c/Users/ISHIKA/feature-x/my_project # Move to your project folder`

`git init # Initialize Git (if not already done)`

`git branch -M main # Rename branch to main`

`git add . # Stage all files`

`git commit -m "Initial commit" # Commit changes`

`git remote add origin https://github.com/Is-hika/my_project.git # Add remote`

`git push -u origin main # Push the code to GitHub`

Reinitialized existing Git repository in /mnt/c/Users/ISHIKA/feature-x/my_project/.git/

On branch main

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ cd /mnt/c/Users/ISHIKA/feature-x/my_project # Move to your project folder
git init # Initialize Git (if not already done)
git branch -M main # Rename branch to main
git add . # Stage all files
git commit -m "Initial commit" # Commit changes
git remote add origin https://github.com/Is-hika/my_project.git # Add remote (skip if already added)
git push -u origin main # Push the code to GitHub
Reinitialized existing Git repository in /mnt/c/Users/ISHIKA/feature-x/my_project/.git/
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
error: remote origin already exists.
Username for 'https://github.com': Is_hika
Password for 'https://Is_hika@github.com':
branch 'main' set up to track 'origin/main'.
Everything up-to-date
```



- Sudo apt update

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ sudo apt update
sudo apt install subversion
[sudo] password for ubuntu11:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Fetched 126 kB in 2s (54.0 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
21 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
subversion is already the newest version (1.14.3-1build4).
The following package was automatically installed and is no longer required:
  libllvm17t64
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 21 not upgraded.
```

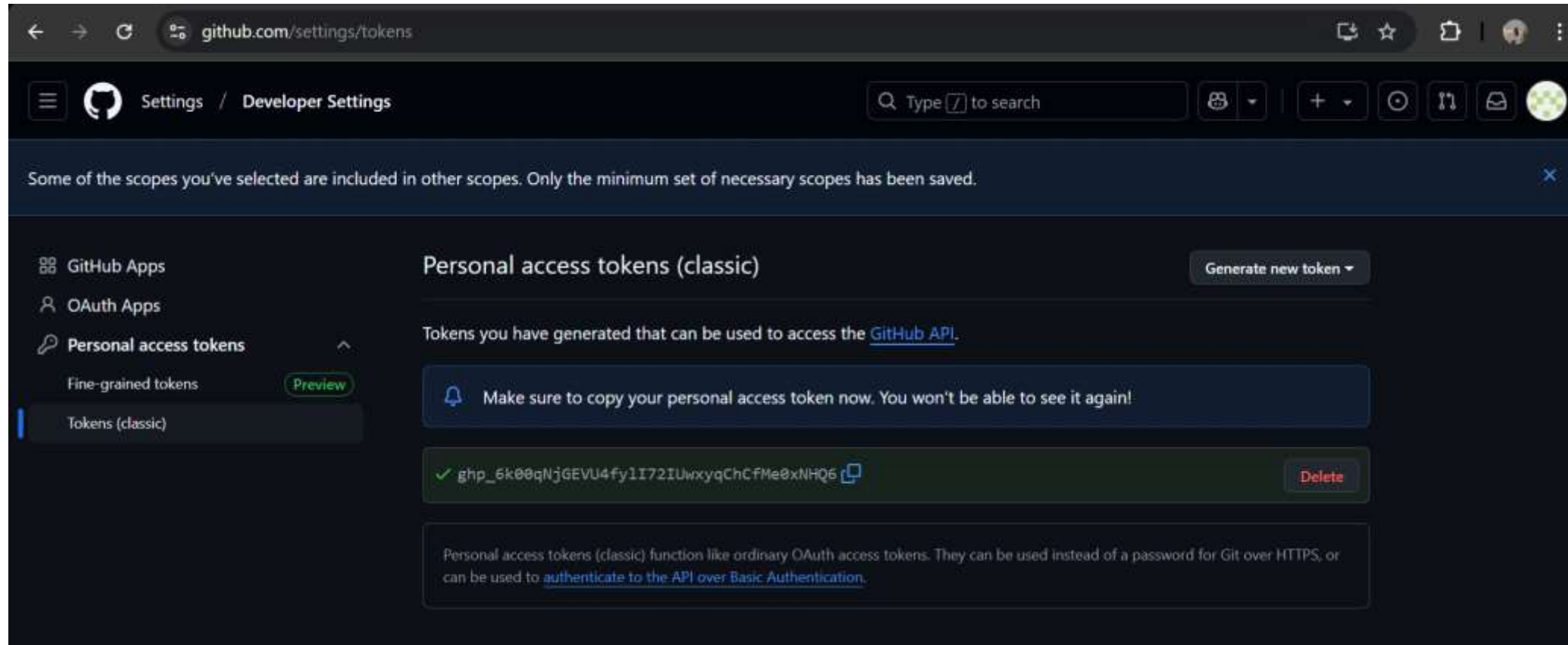


CREATING MY REPO IN GITHUB

```
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$ git push -u origin main
Username for 'https://github.com': Is_hika
Password for 'https://Is_hika@github.com':
Enumerating objects: 31, done.
Counting objects: 100% (31/31), done.
Delta compression using up to 12 threads
Compressing objects: 100% (19/19), done.
Writing objects: 100% (31/31), 2.30 KiB | 9.00 KiB/s, done.
Total 31 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Is-hika/my_project.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
ubuntu11@DESKTOP-GLIB608:/mnt/c/Users/ISHIKA/feature-x/my_project$
```



GENERATING TOKENS



The screenshot shows the GitHub Developer Settings page for Personal access tokens (classic). The browser address bar shows `github.com/settings/tokens`. The page header includes the GitHub logo, "Settings / Developer Settings", a search bar, and various utility icons. A notification banner at the top states: "Some of the scopes you've selected are included in other scopes. Only the minimum set of necessary scopes has been saved." The left sidebar contains navigation links: "GitHub Apps", "OAuth Apps", "Personal access tokens" (selected), "Fine-grained tokens" (with a "Preview" button), and "Tokens (classic)". The main content area is titled "Personal access tokens (classic)" and includes a "Generate new token" button. Below the title, a message says: "Tokens you have generated that can be used to access the [GitHub API](#)." A warning box with a bell icon states: "Make sure to copy your personal access token now. You won't be able to see it again!". A list of generated tokens is shown, with the first token being `ghp_6k00qNjGEVU4fy1I72IUwxyqChCfMe0xNHQ6`, followed by a copy icon and a "Delete" button. A descriptive box at the bottom explains: "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](#)."

github.com/settings/tokens

Settings / Developer Settings

Search Type to search

Some of the scopes you've selected are included in other scopes. Only the minimum set of necessary scopes has been saved.

GitHub Apps

OAuth Apps

Personal access tokens

Fine-grained tokens [Preview](#)

Tokens (classic)

Personal access tokens (classic) [Generate new token](#)

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

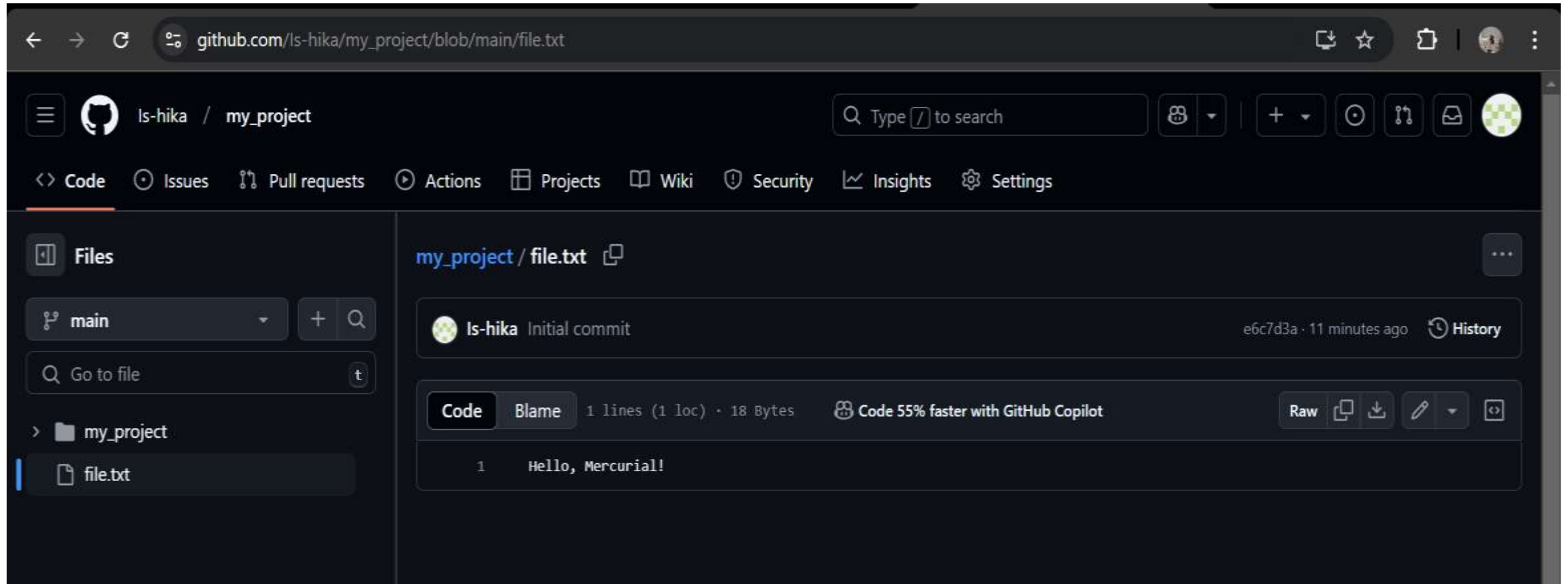
Make sure to copy your personal access token now. You won't be able to see it again!

✓ ghp_6k00qNjGEVU4fy1I72IUwxyqChCfMe0xNHQ6 [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](#).



YOUR REPOSITORY IS SUCCESSFULLY SET UP, AND YOUR FILE **FILE.TXT** IS VISIBLE IN **GITHUB**.



The screenshot shows a web browser displaying a GitHub repository page. The address bar shows the URL `github.com/ls-hika/my_project/blob/main/file.txt`. The page header includes the repository name `ls-hika / my_project` and a search bar. Below the header is a navigation bar with links for `Code`, `Issues`, `Pull requests`, `Actions`, `Projects`, `Wiki`, `Security`, `Insights`, and `Settings`. The left sidebar shows the `Files` section with a dropdown menu set to `main` and a search bar. Below this, a folder icon is followed by `my_project`, and a file icon is followed by `file.txt`. The main content area shows the file `file.txt` with a commit history section. The commit history shows a single commit by `ls-hika` with the message `Initial commit` and the hash `e6c7d3a`, dated `11 minutes ago`. Below the commit history, there are tabs for `Code` and `Blame`. The `Code` tab is selected, showing the file content: `1 Hello, Mercurial!`. The file size is `18 Bytes`. There is also a link to `Code 55% faster with GitHub Copilot`. At the bottom right of the file content, there are buttons for `Raw`, `Copy`, `Download`, `Edit`, and `Diff`.



HG. CONTAINS:

The screenshot shows a GitHub repository page for 'my_project' by user 'ls-hika'. The browser address bar shows the URL 'github.com/ls-hika/my_project/tree/main/my_project/.hg'. The repository page displays the file structure on the left and the commit history on the right.

Files

- main
- Go to file
- my_project
 - .hg
 - cache
 - store
 - wcache
 - 00changelog.i
 - branch
 - dirstate
 - last-message.txt
 - requires
 - undo.backup.branch.bck
 - undo.backup.dirstate.bck
 - undo.desc

my_project / my_project / .hg

Initial commit
e6c7d3a · 12 minutes ago History

Name	Last commit message	Last commit date
..		
cache	Initial commit	12 minutes ago
store	Initial commit	12 minutes ago
wcache	Initial commit	12 minutes ago
00changelog.i	Initial commit	12 minutes ago
branch	Initial commit	12 minutes ago
dirstate	Initial commit	12 minutes ago
last-message.txt	Initial commit	12 minutes ago
requires	Initial commit	12 minutes ago
undo.backup.branch.bck	Initial commit	12 minutes ago



THANK YOU

