

DEVOPS ASSIGNMENT

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INTRODUCTION TO MERCURIAL

Mercurial is a **distributed version control system (DVCS)** designed for efficient handling of projects of all sizes. It is similar to Git in functionality but emphasizes simplicity and ease of use. Mercurial is written in Python and is known for its **intuitive commands**, **robust performance**, and **cross-platform compatibility**. It is widely used in both open-source and enterprise projects.

Key Features of Mercurial:

1. Distributed Version Control: Every developer has a full copy of the repository, enabling offline work and independent branching.
2. Lightweight and Fast: Efficient handling of large projects and binary files.
3. Simple and Intuitive Commands: Commands are easy to learn and use, with a consistent syntax.
4. Cross-Platform: Works on Windows, macOS, and Linux.
5. Extensible: Supports plugins for additional functionality.
6. Secure: Uses SHA-1 hashing for data integrity and supports signed commits.

How to Use Mercurial

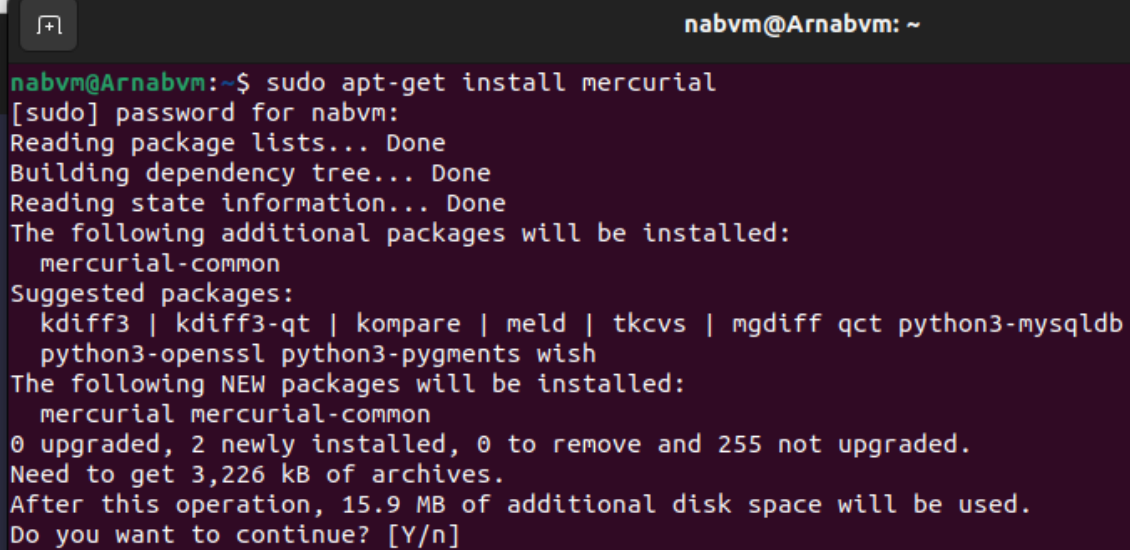
1. Installation

- **Windows:** Download and install from [Mercurial's official website](#).
- **Linux:** Use your package manager (e.g., `sudo apt-get install mercurial` for Ubuntu).

- **macOS:** Use Homebrew (brew install mercurial).

- **NIX:** nix-shell -p mercurial

2. Basic Commands



```
nabvm@Arnabvm: ~  
nabvm@Arnabvm:~$ sudo apt-get install mercurial  
[sudo] password for nabvm:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  mercurial-common  
Suggested packages:  
  kdiff3 | kdiff3-qt | kompare | meld | tkcvs | mgdiff qct python3-mysqldb  
  python3-openssl python3-pygments wish  
The following NEW packages will be installed:  
  mercurial mercurial-common  
0 upgraded, 2 newly installed, 0 to remove and 255 not upgraded.  
Need to get 3,226 kB of archives.  
After this operation, 15.9 MB of additional disk space will be used.  
Do you want to continue? [Y/n]
```

```
Preparing to unpack .../mercurial-common_6.1.1-1ubuntu1_all.deb ...
Unpacking mercurial-common (6.1.1-1ubuntu1) ...
Selecting previously unselected package mercurial.
Preparing to unpack .../mercurial_6.1.1-1ubuntu1_amd64.deb ...
Unpacking mercurial (6.1.1-1ubuntu1) ...
Setting up mercurial-common (6.1.1-1ubuntu1) ...
Setting up mercurial (6.1.1-1ubuntu1) ...

Creating config file /etc/mercurial/hgrc.d/hgext.rc with new version
Processing triggers for man-db (2.10.2-1) ...
nabvm@Arnabvm:~$ hg init my_project
nabvm@Arnabvm:~$ cd my_project
nabvm@Arnabvm:~/my_project$ echo "Hello, Mercurial!" > file.txt
nabvm@Arnabvm:~/my_project$ hg add file.txt
nabvm@Arnabvm:~/my_project$ hg commit -m "Initial commit"
abort: no username supplied
(use 'hg config --edit' to set your username)
nabvm@Arnabvm:~/my_project$ ^C
nabvm@Arnabvm:~/my_project$ hg config --edit

Select an editor. To change later, run 'select-editor'.
 1. /bin/nano          <---- easiest
 2. /usr/bin/vim.tiny
 3. /bin/ed

Choose 1-3 [1]: 1
nabvm@Arnabvm:~/my_project$ hg commit -m "Initial commit"
nabvm@Arnabvm:~/my_project$ hg push
config error: default repository not configured!
(see 'hg help config.paths')
nabvm@Arnabvm:~/my_project$
```

```

abvm@Arnabvm:~/my_project$ hg push
config error: default repository not configured!
see 'hg help config.paths')
abvm@Arnabvm:~/my_project$ hg clone https://hg.example.com/my_project
abort: error: Name or service not known
abvm@Arnabvm:~/my_project$ hg log
changeset: 0:fcdaf23d8d79
tag: tip
user: arnab
date: Fri Feb 14 14:55:48 2025 +0530
summary: Initial commit

abvm@Arnabvm:~/my_project$ hg branch feature-branch
marked working directory as branch feature-branch
branches are permanent and global, did you want a bookmark?)
abvm@Arnabvm:~/my_project$ hg commit -m "Started feature branch"
abvm@Arnabvm:~/my_project$ hg update default # Switch back to the main branch
0 files updated, 0 files merged, 0 files removed, 0 files unresolved
abvm@Arnabvm:~/my_project$ ^[[200~hg update default # Switch back to the main branch
hg: command not found
abvm@Arnabvm:~/my_project$ ~hg merge feature-branch
command '~hg' not found, did you mean:
  command 'thg' from snap tortoisehg (6.5.1)
  command 'hg' from snap mercurial (6.7.4)
  command 'thg' from deb tortoisehg (6.1.1-1)
  command 'chg' from deb mercurial (6.1.1-1ubuntu1)
  command 'hg' from deb mercurial (6.1.1-1ubuntu1)
see 'snap info <snapname>' for additional versions.
abvm@Arnabvm:~/my_project$ hg commit -m "Merged feature-branch into default"
nothing changed

```

1. Initialize a Repository:

```
hg init my_project
```

```
cd my_project
```

2. Add Files:

```
echo "Hello, Mercurial!" > file.txt
```

```
hg add file.txt
```

3. Commit Changes:

```
hg commit -m "Initial commit"
```

4. Clone a Remote Repository:

```
hg clone https://hg.example.com/my_project
```

5. Push Changes to Remote:

```
hg push
```

6. Pull Changes from Remote:

hg pull

7. View Commit History:

hg log

8. Create and Switch Branches:

hg branch feature-branch

hg commit -m "Started feature branch"

hg update default # Switch back to the main branch

9. Merge Branches:

hg merge feature-branch

hg commit -m "Merged feature-branch into default"