



FEBRUARY 16, 2023

# DevOps Classroomnotes 16/Feb/2023

## Git

- We will be using Git for local repository.
- For today and next session, assume we have one user and one system.
- Installing Git on Windows: Follow classroom recording

### Create a folder and make this a local repo using git

- Create a folder anywhere on your system

```
mkdir c:\gitpractice
cd c:\gitpractice
mkdir hellogit
cd hellogit
```

- on \*nix systems

```
mkdir -p /tmp/gitpractice/hellogit
cd /tmp/gitpractice/hellogit
```

- To create a local repo using a initialize command init in git

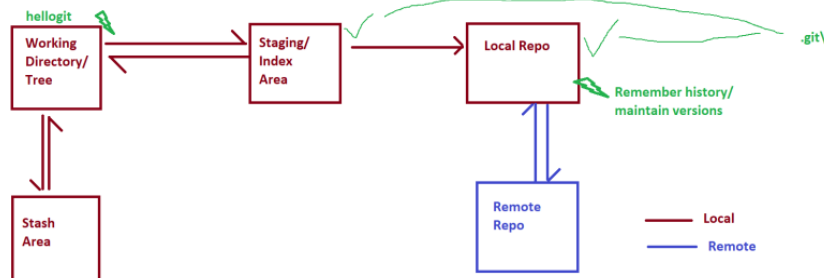
The terminal window shows the following commands and output:

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit
$ git init
Initialized empty Git repository in C:/gitpractice/hellogit/.git/

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$
```

The file explorer shows the directory structure: This PC > Windows (C:) > gitpractice > hellogit. A green circle highlights the .git directory, with a green arrow pointing from the terminal output to it.

- Current state



- For the changes to be versioned we need to have the changes in local repo.
  - We work on working tree
  - move the changes to staging area
  - move the changes from staging area to local repo
  - once the changes are in local repo we have some version, who has done the change, when the change was done, changes

- Lets create a main.py in src folder and ask for status

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ mkdir src

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ touch src/main.py

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  src/

nothing added to commit but untracked files present (use "git add" to track)

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$
```

- Lets add the changes

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ git add ./src/

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
  new file:   src/main.py
```

- Lets commit the changes

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ git commit -m "This is my first commit"
Author identity unknown

*** Please tell me who you are.

Run

  git config --global user.email "you@example.com"
  git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'qtdevops@qtgitworkstatio.(none)')

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$
```

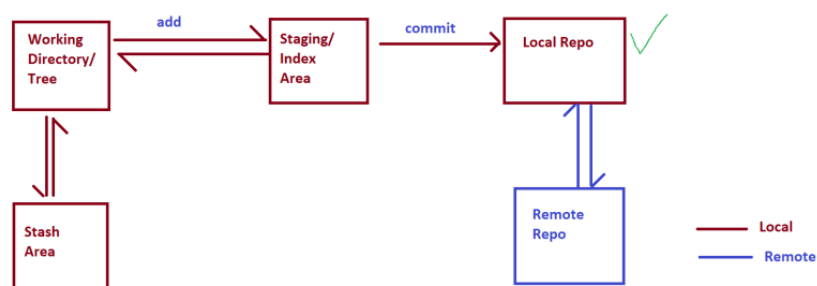
- Git asks for who you are, configure email and username. Then commit

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ git config --global user.email qtkhajadevops@gmail.com

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ git config --global user.name qtkhajadevops

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/hellogit (master)
$ git commit -m "This is my first commit"
[master (root-commit) b5a5ccd] This is my first commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 src/main.py
```

- Workflow



- Now check the status

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git status
On branch master
nothing to commit, working tree clean
```

- Working tree clean represents your working tree has no changes over and top of what is present in your local repo.
- Lets check history

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git log
commit b5a5ccd157bd659d7d4f7387fae37c07fd701225 (HEAD -> master)
Author: qtkhajadevops <qtkhajadevops@gmail.com>
Date: Thu Feb 16 03:20:30 2023 +0000

    This is my first commit
```

- Lets add one more change

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ touch src/app.py

qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    src/app.py

nothing added to commit but untracked files present (use "git add" to track)
```

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git add src/app.py
```

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   src/app.py
```

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$
```

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git commit -m "This is my second commit"
[master 47be13f] This is my second commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 src/app.py
```

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git status
On branch master
nothing to commit, working tree clean
```

```
qtdevops@qtgitworkstatio MINGW64 /c/gitpractice/helloGit (master)
$ git log
commit 47be13fb22cb5c31f74b2185cd9c054b5da544 (HEAD -> master)
Author: qtkhajadevops <qtkhajadevops@gmail.com>
Date: Thu Feb 16 03:29:01 2023 +0000

    This is my second commit
```

```
commit b5a5ccd157bd659d7d4f7387fae37c07fd701225
Author: qtkhajadevops <qtkhajadevops@gmail.com>
Date: Thu Feb 16 03:20:30 2023 +0000

    This is my first commit
```

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