

Q1

## Q1) Git Branching Strategy

### Branching strategy:

A Git branching strategy helps organize work on a project by using different branches for different purposes. Here's a common and simple one:

#### 1)main Branch:

- This is the production-ready branch.
- Code here is always stable and deployable.

#### 2)developer Branch:

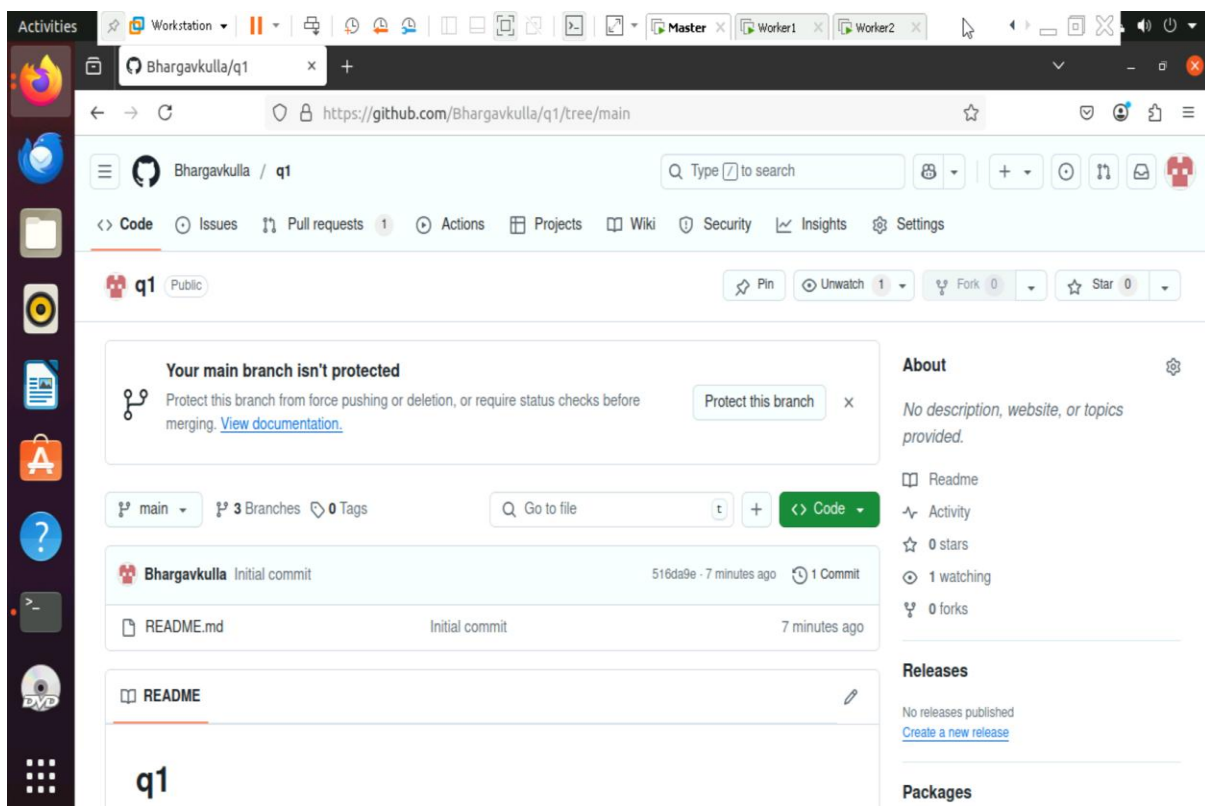
- This branch is used to merge all features under development.
- Acts as an integration branch for all new features before they are pushed to main.

#### 3)feature Branches:

- These are individual branches for each new feature or bug fix.
- Created from the developer branch.
- Developers work on these branches independently, then merge back into developer when the feature is complete.

Create a repository

Gitrepo: <https://github.com/Bhargavkulla/q1/tree/feature/login>



Q1

Create the branching strategy as mentioned above

```
master@master-vm: ~/Desktop/q1
master@master-vm:~/Desktop/retest-jenkins-1$ cd ..
master@master-vm:~/Desktop$ git clone https://github.com/Bhargavkulla/q1.git
Cloning into 'q1'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 856 bytes | 856.00 KiB/s, done.
master@master-vm:~/Desktop$ cd q1
master@master-vm:~/Desktop/q1$ git checkout -b developer main
Switched to a new branch 'developer'
master@master-vm:~/Desktop/q1$ git push -u origin developer
Username for 'https://github.com': Bhargavkulla
Password for 'https://github.com': 
Total 0 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'developer' on GitHub by visiting:
remote:   https://github.com/Bhargavkulla/q1/pull/new/developer
remote:
To https://github.com/Bhargavkulla/q1.git
 * [new branch]   developer -> developer
Branch 'developer' set up to track remote branch 'developer' from 'origin'.
master@master-vm:~/Desktop/q1$ git checkout -b feature/login developer
Switched to a new branch 'feature/login'
master@master-vm:~/Desktop/q1$ git push -u origin feature/login
Username for 'https://github.com': Bhargavkulla
Password for 'https://github.com': 
Total 0 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'feature/login' on GitHub by visiting:
remote:   https://github.com/Bhargavkulla/q1/pull/new/feature/login
remote:
To https://github.com/Bhargavkulla/q1.git
 * [new branch]   feature/login -> feature/login
Branch 'feature/login' set up to track remote branch 'feature/login' from 'origin'.
master@master-vm:~/Desktop/q1$ echo "This is a sample login feature." > login.txt
```

```
master@master-vm:~/Desktop/q1$ echo "This is a sample login feature." > login.txt
master@master-vm:~/Desktop/q1$ git add login.txt
master@master-vm:~/Desktop/q1$ git commit -m "Add login.txt for login feature"
[feature/login c34f7f0] Add login.txt for login feature
1 file changed, 1 insertion(+)
create mode 100644 login.txt
master@master-vm:~/Desktop/q1$ git push
Username for 'https://github.com': Bhargavkulla
Password for 'https://github.com': 
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 2 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 325 bytes | 325.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/Bhargavkulla/q1.git
516da9e..c34f7f0 feature/login -> feature/login
master@master-vm:~/Desktop/q1$
```

Q1

## Git repo branching strategy

The first screenshot shows the main branch of a repository named 'q1' by user 'Bhargavkulla'. A warning banner at the top states 'Your main branch isn't protected' with a 'Protect this branch' button. A 'Switch branches/tags' dropdown menu is open, showing 'main' as the current branch and 'default' as the target. The commit history shows an 'Initial commit' from 10 minutes ago. The right sidebar contains sections for 'About', 'Releases', and 'Packages', all indicating no content has been published yet.

The second screenshot shows the file view for 'login.txt' in the 'feature/login' branch. The file content is 'This is a sample login feature.' The interface includes a navigation bar with links to Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The file view includes tabs for 'Code' and 'Blame', and a 'Go to file' search bar.