

## Assignment 1:

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Initialize a new Git repository in a directory of your choice. Add a simple text file to the repository and make the first commit.

### 1. Initialize Git Repository

- **Command:** `git init`
- **Action:** Reinitialized the existing Git repository in `E:\WiproJava`.

### 2. Create and Write to File

- **Command:** `echo "Object oriented programming system." > oops.txt`
- **Action:** Created `oops.txt` and wrote the text "Object oriented programming system." to it.

### 3. Stage the File

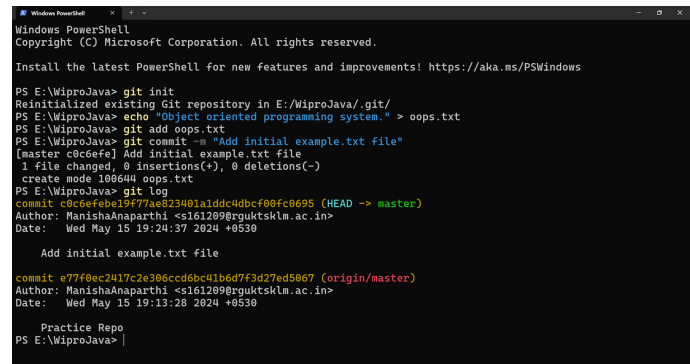
- **Command:** `git add oops.txt`
- **Action:** Staged `oops.txt` for commit.

### 4. Commit the File

- **Command:** `git commit -m "Add initial example.txt file"`
- **Action:** Committed the staged file with the message "Add initial example.txt file".
- **Result:** Created commit `c0c6efe`:
  - 1 file changed (created `oops.txt`).
  - File mode `100644`.

### 5. View Commit History

- **Command:** `git log`
- **Action:** Displayed the commit history.
- **Commits shown:**
  - Commit `c0c6efe`: "Add initial example.txt file" by ManishaAnaparthi on May 15, 2024, 19:24:37 +0530.
  - Commit `e77f0ec`: "Practice Repo" by ManishaAnaparthi on May 15, 2024, 19:13:28 +0530.



```
Windows PowerShell
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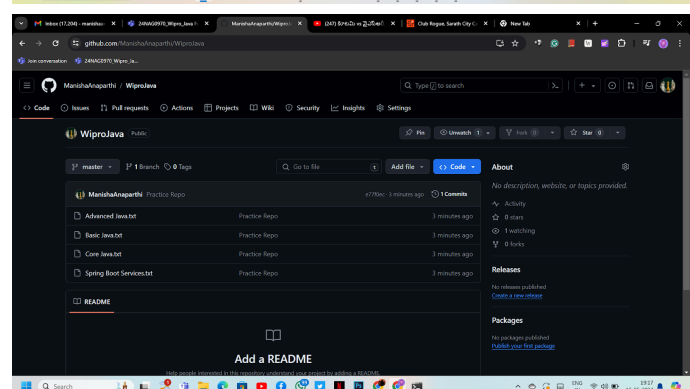
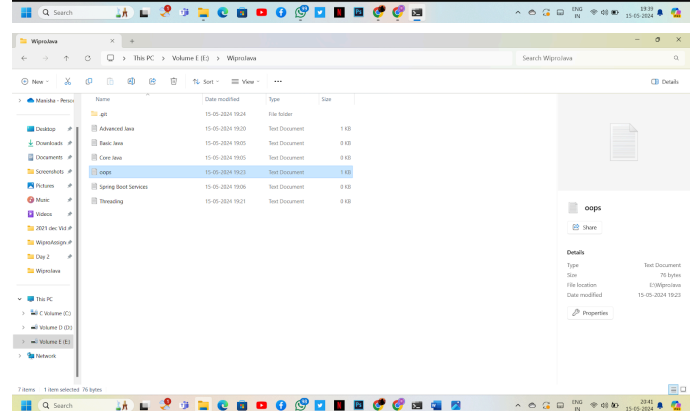
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PS E:\WiproJava> git init
Reinitialized existing Git repository in E:\WiproJava\.git/
PS E:\WiproJava> echo "Object oriented programming system." > oops.txt
PS E:\WiproJava> git add oops.txt
PS E:\WiproJava> git commit -m "Add initial example.txt file"
[master c0c6efe] Add initial example.txt file
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 oops.txt
PS E:\WiproJava> git log
commit c0c6efe19f77ae823401a1ddc4dbcf0efc0695 (HEAD -> master)
Author: ManishaAnaparthi <s161209@gujtsklm.ac.in>
Date:   Wed May 15 19:24:37 2024 +0530

    Add initial example.txt file

commit e77f0ec2417c2e306ccd6bc41b6d7f3d27ed5067 (origin/master)
Author: ManishaAnaparthi <s161209@gujtsklm.ac.in>
Date:   Wed May 15 19:13:28 2024 +0530

    Practice Repo
PS E:\WiproJava>
```



## Assignment 2:

### Branch Creation and Switching :

Create a new branch named 'feature' and switch to it. Make changes in the 'feature' branch and commit them.

#### 1. Reinitialize Git Repository

- **Command:** `git init`
- **Description:** Initializes a new Git repository or reinitializes an existing one in the current directory.

#### 2. Create a New Branch

- **Command:** `git branch feature`
- **Description:** Creates a new branch named 'feature'.

#### 3. Switch to the New Branch

- **Command:** `git switch feature`
- **Description:** Switches the current working branch to 'feature'.

#### 4. Add Text to a File

- **Command:** `echo "This is a change in the feature branch." >> branch.txt`
- **Description:** Appends the text "This is a change in the feature branch." to the file 'branch.txt'. If the file does not exist, it creates it.

#### 5. Stage Changes

- **Command:** `git add branch.txt`
- **Description:** Stages the 'branch.txt' file, marking it for inclusion in the next commit.

#### 6. Check the Status

- **Command:** `git status`
- **Description:** Displays the status of the working directory and staging area, showing which changes are staged for the next commit.

#### 7. Commit Changes

- **Command:** `git commit -m "Add changes to branch.txt in the feature branch"`
- **Description:** Commits the staged changes with a message describing the changes.

The first screenshot shows a Windows PowerShell terminal window with the following commands and output:

```
PS E:\WiproJava> git init
Reinitialized existing Git repository in E:\WiproJava\.git/
PS E:\WiproJava> git branch feature
PS E:\WiproJava> git switch feature
Switched to branch 'feature'
PS E:\WiproJava> echo "This is a change in the feature branch." >> branch.txt
PS E:\WiproJava> git add branch.txt
On branch feature
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   branch.txt
PS E:\WiproJava> git add branch.txt
PS E:\WiproJava> git commit -m "Add changes to branch.txt in the feature branch"
[feature 098a688] Add changes to branch.txt in the feature branch
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 branch.txt
PS E:\WiproJava> git status
On branch feature
nothing to commit, working tree clean
```

The second screenshot shows the same PowerShell terminal window with the following commands and output:

```
PS E:\WiproJava> git branch feature
fatal: a branch named 'feature' already exists
PS E:\WiproJava> git branch feature_e
PS E:\WiproJava> git checkout feature_e
Switched to branch 'feature_e'
PS E:\WiproJava> echo "this is the feature branch" >> feature_e.txt
PS E:\WiproJava> git add .
PS E:\WiproJava> git commit -m "Added feature_e.txt in feature branch"
[feature_e 35c1775] Added feature_e.txt in feature branch
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 feature_e.txt
PS E:\WiproJava>
```

The third screenshot shows the GitHub web interface for the repository 'WiproJava'. The 'Branches' tab is selected, showing a list of branches: 'feature' (default), 'feature\_e', and 'main'. The 'feature' branch is the current branch.

## Assignment 3:

### Feature Branches and Hotfixes

Create a 'hotfix' branch to fix an issue in the main code. Merge the 'hotfix' branch into 'main' ensuring that the issue is resolved."

#### 1. Create and List Branches:

- `git branch hotfix`: Tried to create 'hotfix' branch (failed because it already exists).
- `git branch hot\_fix`: Created 'hot\_fix' branch.
- `git branch`: Listed all branches.

#### 2. Switch to 'hot\_fix' Branch:

- `git checkout hot\_fix`: Switched to 'hot\_fix' branch.

#### 3. Stage and Commit Changes:

- `git add .`: Staged all changes.
- `git status`: Checked status of staged changes.
- `git commit -m "hotfix added file"`: Committed changes with a message.

#### 4. Push Changes to Remote:

- `git push origin hot\_fix`: Pushed 'hot\_fix' branch to remote repository.

#### 5. Merge Branches:

- `git checkout master`: Switched to 'master' branch.
- `git checkout hot\_fix`: Switched back to 'hot\_fix' branch.
- `git merge hot\_fix`: Merged 'hot\_fix' into the current branch (no changes to merge).

```
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PS E:\WiproJava> git branch hotfix
fatal: a branch named 'hotfix' already exists
PS E:\WiproJava> git branch hot_fix
PS E:\WiproJava> git branch
* master
  hot_fix
  new_branch
PS E:\WiproJava> git checkout hot_fix
Switched to branch 'hot_fix'
PS E:\WiproJava> git add .
PS E:\WiproJava> git status
On branch hot_fix
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   hello.txt
PS E:\WiproJava> git commit -m "hotfix added file"
[hot_fix 669bdc3] hotfix added file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 hello.txt
PS E:\WiproJava> git push origin hot_fix
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 16 threads
Compressing objects: 100% (9/9), done.
Writing objects: 100% (9/9), 862 bytes | 431.00 KiB/s, done.
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
```

```
PS E:\WiproJava> git commit -m "hotfix added file"
[hot_fix 669bdc3] hotfix added file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 hello.txt
PS E:\WiproJava> git push origin hot_fix
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 16 threads
Compressing objects: 100% (9/9), done.
Writing objects: 100% (9/9), 862 bytes | 431.00 KiB/s, done.
Total 0 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), completed with 1 local object.
remote:
remote: Create a pull request for 'hot_fix' on GitHub by visiting:
remote:   https://github.com/Manishanaparthi/WiproJava/pull/new/hot_fix
remote:
to https://github.com/Manishanaparthi/WiproJava.git
 * [new branch]   hot_fix -> hot_fix
PS E:\WiproJava> git checkout master
Switched to branch 'master'
PS E:\WiproJava> git checkout hot_fix
Switched to branch 'hot_fix'
PS E:\WiproJava> git merge hot_fix
Already up to date.
PS E:\WiproJava>
```

