

Branching, Merging, and Diffs Workflow

A. Initial Commits and Push to Main

1. Add h1 tag in README.md and commit:

```
git add README.md
```

```
git commit -m "C0: Added h1 tag in README.md"
```

2. Create a new .txt file and commit:

```
git add newfile.txt
```

```
git commit -m "C1: Created new txt file"
```

3. Modify the txt file and commit:

```
git add newfile.txt
```

```
git commit -m "C2: Modified txt file"
```

4. Push to main branch:

```
git push origin main
```

B. Create 'iss53' Branch and Diff Commands

1. Create and switch to 'iss53' branch:

```
git checkout -b iss53
```

2. Create index.html and update README.md, then commit:

```
git add index.html README.md
```

```
git commit -m "C3: Added index.html and updated README.md"
```

3. View diff between commits C1 and C2:

```
git diff <C1_hash> <C2_hash>
```

4. View diff between 'main' and 'iss53':

```
git diff main..iss53
```

5. Push iss53 branch:

```
git push origin iss53
```

C. Create and Push 'hotfix' Branch

1. Create and switch to 'hotfix' branch:

```
git checkout -b hotfix
```

2. Update txt file and commit:

```
git add newfile.txt
```

```
git commit -m "C4: Updated new txt file"
```

3. Push hotfix branch:

```
git push origin hotfix
```

D. Merge 'hotfix' into 'main' and Delete Branch

1. Switch to main branch:

```
git checkout main
```

2. Merge hotfix into main:

```
git merge hotfix
```

3. Delete hotfix branch:

```
git branch -d hotfix
```

E. Merge 'iss53' into 'main' and Delete Branch

1. Make sure you're on main branch:

```
git checkout main
```

2. Merge iss53 into main:

```
git merge iss53
```

3. Delete iss53 branch:

```
git branch -d iss53
```