

Problem Statement 10: Tagging and Releases

- Create a tag for a specific commit to mark a release.
- Explore the difference between lightweight tags and annotated tags

Solution:

Tagging:

Tagging refers to creating a named reference (tag) for a specific commit. Tags are used to mark specific points in Git history, such as software releases or important milestones. They provide a way to easily refer to and retrieve a particular version of the code.

Create tags to mark specific versions

```
C:\Users\DELL\simple website>git add .

C:\Users\DELL\simple website>git commit -m "second"
[master 84d3434] second
 1 file changed, 41 insertions(+)
 create mode 100644 src/second.html

C:\Users\DELL\simple website>git tag v0.1

C:\Users\DELL\simple website>git push origin v0.1
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 743 bytes | 92.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/kavinvelavan/simple-website.git
 * [new tag]          v0.1 -> v0.1
```

```
C:\Users\DELL\simple website>git tag v0.2

C:\Users\DELL\simple website>git push origin v0.2
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 698 bytes | 58.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/kavinvelavan/simple-website.git
 * [new tag]          v0.2 -> v0.2
```

Lightweight Tags:

- Lightweight tags are essentially just a reference to a specific commit. They are created using the git tag command without the -a, -s, or -m options.
- They are simple pointers to a specific commit and only contain the commit checksum (SHA-1 hash).
- Lightweight tags don't store any additional information, such as the tagger's name, email, or a message.
- Example of creating a lightweight tag:

git tag v1.0

Annotated Tags:

- Annotated tags, on the other hand, are more feature-rich. They store additional information like the tagger's name, email, date, and a tagging message.
- They are created using the -a, -s, or -m options with the git tag command.
- Annotated tags are useful for creating more detailed release notes and documentation about a specific version.
- Example of creating an annotated tag:

git tag -a v1.0 -m "Release version 1.0"

- Annotated tags are generally preferred for creating official release points in a project because they provide more context and information.