

AIM :

To create a GitHub account, set up a repository, configure version control settings, and implement branching strategies.

PROCEDURE :**1. Creating a GitHub Account**

- Open a web browser and go to <https://github.com>.
- Click Sign up and enter the required details, including email, username, and password.
- Complete any security verification, then confirm your email address by following the link in the verification email.

2. Creating a New Repository

- Log into GitHub.
- Click on the “+” icon at the top right and select New repository.
- Enter a Repository Name and optionally add a Description.
- Choose the Visibility (Public or Private).
- Optionally, initialize with a README file, .gitignore file, and choose a license.
- Click Create repository.

3. Configuring Repository Settings

- Open the newly created repository, go to Settings.
- Under Manage Access, add collaborators or adjust permission levels as needed.
- For Branch Protection Rules, configure specific rules for the main branch to ensure code quality.
- Enable GitHub Pages if you want to host the repository as a website.

4. Setting Up Versioning

- Versioning in Git is handled by commits:
 - Make changes to files and commit them using Git.
 - Tag specific versions by running `git tag <version_number>` in your terminal.
 - Push tags with `git push origin <tag_name>` to save them in the repository.

- In GitHub, navigate to Releases to formally create version releases.

5. Implementing Branching Strategy

- Open the repository, go to Settings > Branches.
- Under Branch protection rules, specify rules for the main branch to prevent accidental changes.
- Implement branching strategies:
 - Create a main branch for stable code.
 - Add a develop branch for integrating features.
 - For each new feature, create a feature branch (e.g., feature-xyz).
 - For urgent fixes, create a hotfix branch.

6. Cloning and Committing Changes Locally

- To start working locally, clone the repository by running:

git clone <repository_url>

- After making changes, add and commit them:

git add .

git commit -m "Commit message"

7. Pushing Changes and Pull Requests

- Push changes to the repository:

git push origin <branch_name>
- Use Pull Requests (PRs) to merge branches. In GitHub, go to the Pull Requests tab, select the branches, and submit a PR for review.

Preparation	10	
Observation	10	
Output	10	
Viva	10	
Record	10	
Total	50	

RESULT :

Hence, a GitHub account was created, a repository was set up, and repository settings, versioning, and branching were configured as per the procedure.