**GitHub**

**Introduction**

GitHub is a GIT repository hosting service that supports features of GIT version control, SCM and adds many of its own. While GIT is a command-line tool GitHub provides web based GUI. It also provides access control and collaboration features like bug tracking, task management, and wiki for every project.

**Features**

* Source code management
* Issue tracking
* Code review
* Organizations
* Markdown formatting and support for Emojis
* Collaboration
* Wikis
* Desktop and mobile integration
* Enterprise GitHub

**Source code management**GitHub supports all operations like creating repository, checkout, commit, branching, etc. that helps in managing source code.

**Issue Tracking**GitHub provides integrated issue tracking tool that helps to raise, label, set milestones, filter, comment on issues.

**Code Review**GitHub allows discussing about any change, after pull request or commit, by adding comments to a file or a line of file. It also allows comparing two branches and provides a compare view showing list of all the commits, sum of all files changes across all commits, and a diff of the changes to summarize the changes.

**Organizations**GitHub allows creating organizations that helps in managing teams and defining read, write or admin-level access to repositories.

**Markdown formatting and support for Emojis**GitHub provides support for Markdown formatting and Emojis that helps in highlighting, mentioning people or teams, creating links to other issues and adding Emoji.

**Collaboration**GitHub provides facility to browse all open source projects, clone them, put comments, raise issues, contribute, watch projects and follow other people.

**Wikis**GitHub allows creating Wiki pages that contains description of a project.

**Desktop and mobile integration**GitHub provides desktop application for Windows and Mac making code sharing simple. It can be used to clone repositories, create branches, browse history, and commit changes.

**Enterprise GitHub**This is a self-hosted GitHub for an enterprise, it can be deployed on own servers. This version of GitHub supports all features provided by open source GitHub and adds security to it by providing support for HTTPS, LDAP, and CAS. It also provides integration with JIRA, Jenkins, and communication tools like chat, activity streams and email, etc. It is licensed and costs $2,500 per 10-user seat pack per year.

**GitHub Flow**

GitHub Flow is a lightweight, branch-based workflow that supports teams and projects where deployments are made regularly. Few Steps are listed below:

* Create branch – Create a branch from master of repository for adding feature, bug fixing, etc.
* Add commits – Commit code changes to the above branch
* Open a pull request – Pull request can be opened for sharing code, ideas, create review or seek advice
* Discuss and review your code – After pull request is opened team can add comments or queries
* Merge – After resolving issues, queries and successful testing branch is merged to master

For detailed understanding of flow please refer <https://guides.github.com/introduction/flow/>.

For hands on please sign up/login to <https://github.com/> and refer guides listed below.

**User guide**  
<https://enterprise.github.com/resources>

**GitHub feature guide**  
<https://guides.github.com/>

**List of tools that can be integrated with GitHub**<https://github.com/integrations>