GitHub is a code hosting platform for collaboration and version control.

GitHub lets you (and others) work together on projects.

GitHub essentials are:

* Repositories
* Branches
* Commits
* Pull Requests
* Git (the version control software GitHub is built on)

Repository

A GitHub **repository** can be used to store a development **project**.

It can contain **folders** and any type of **files** (HTML, CSS, JavaScript, Documents, Data, Images).

A GitHub repository should also include a **licence** file and a **README** file about the project.

A GitHub repository can also be used to store ideas, or any resources that you want to share.

Branch

A GitHub branch is used to work with different **versions** of a repository at the same time.

By default a repository has a **master** branch (a production branch).

Any other branch is a **copy** of the master branch (as it was at a point in time).

New Branches are for bug fixes and feature work separate from the master branch. When changes are ready, they can be merged into the master branch. If you make changes to the master branch while working on a new branch, these updates can be pulled in.

Commits

At GitHub, changes are called commits.

Each commit (change) has a description explaining why a change was made.

Pull Requests

Pull Requests are the heart of GitHub **collaboration**.

With a pull request you are **proposing** that your changes should be **merged** (pulled in) with the master.

Pull requests show content **differences**, changes, additions, and subtractions in **colors** (green and red).

As soon as you have a commit, you can open a pull request and start a discussion, even before the code is finished.

A a great way to learn GitHub, before working on larger projects, is to open pull requests in your own repository and merge them yourself.

You merge any changes into the master by clicking a "Merge pull request" button.