Objectives:

• In this session, students are aimed towards becoming fluent when it comes to using the functionalities of GitHub.

• To provide knowledge in regards of version control systems.

• To encourage collaboration with students more often.

GitHub as a Platform for Development

GitHub is a code hosting and development platform for version control and collaboration. It lets you and others work together on projects from anywhere.

In here, we will learn GitHub essentials like repositories, branches, commits and pull requests. We will learn the pull function of GitHub, which is a popular way to create and review a code.

In order for us to start, students are required to have their own GitHub account and an access to the internet.

Difference of Git and GitHub

Git is a version control system (VCS). It lets you manage and keep track of your source code history. GitHub is a cloud-based hosting service that lets you manage Git repositories. GitHub is designed to help you manage them better.

Starting with GIT

It is used for:

• Tracking code changes

• Tracking who made changes

• Coding collaboration

What does Git do?

• Manage projects with Repositories

• Clone a project to work on a local copy

• Control and track changes with Staging and Committing

• Branch and Merge to allow for work on different parts and versions of a project

• Pull the latest version of the project to a local copy

• Push local updates to the main project

Working with Git

• Initialize Git on a folder, making it a Repository

• Git now creates a hidden folder to keep track of changes in that folder

• When a file is changed, added or deleted, it is considered modified

• You select the modified files you want to Stage

• The Staged files are Committed, which prompts Git to store a permanent snapshot of the files

• Git allows you to see the full history of every commit.

• You can revert back to any previous commit.

• Git does not store a separate copy of every file in every commit, but keeps track of changes made in each commit!

Why Git?

• Over 70% of developers use Git!

• Developers can work together from anywhere in the world.

• Developers can see the full history of the project.

• Developers can revert to earlier versions of a project.