SOURCE CODE MANAGEMENT USING GIT & GITHUB

GitHub Actions

APSSDC
Andhra Pradesh State Skill Development Corporation
(Department of Skills Development and Training, Govt of Andhra Pradesh)

Skill AP
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Introduction:

Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM (Software Code Management) tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple workflows.

GitHub is an American company that provides hosting for software development version control using Git. It is a subsidiary of Microsoft, which acquired the company in 2018. It offers all of the distributed version control and source code management (SCM) functionality of Git as well as adding its own features. It provides access control and several collaboration features such as bug tracking, feature requests, task management, and wikis for every project.

Software Documentation / Technical Documentation is an important task during the product development so that the users need not to worry about how to use your product. From a very small project to a project with a huge number of developers, technical documentation writing is easy by using ReadTheDocs and Sphinx tools.

Duration:
- 2 Days or 12 Hours.

Syllabus:
- Introduction To Source Code Management
- Git Basics
    - Initializing repositories
    - Accessing Existing Repositories
    - Adding / Removing files from Staging area
    - Committing the changes to repository
    - Undoing the commits that are made
- Remote
    - Creating an Account on GitHub
    - Create a remote repository
    - Adding the remotes
    - Push, pull and fetch commands.
- Markdown Syntax
    - Adding text of various styles and formats
    - Adding images along with text
    - Creating Ordered / Unordered lists-
    - Adding videos/pdfs to the markdown file
    - Adding links in the markdown file.

- Git Branching
  - Uses of Branching
  - Create Branch
  - Switch to new Branch and back
  - Merge the new branch to Master
  - How to send the branch code to new branch on remote
- Pull Requests
  - Collaborate on existing projects
  - Collaborate on open source projects
  - Sending pull requests and handling them
- GitHub Pages
  - Creation of personal portfolio site
  - Creating a GitHub Page using Markdown and Jekyll themes for repositories.
- Technical Documentation
  - ReadTheDocs
  - Sphinx

Course Objectives:

The objective of this course is

- To impart knowledge on version control and source management to the students & Faculty of engineering colleges across the state of Andhra Pradesh as Source Code Management and Version Control are very much important in the life of a software developer.
- To impart knowledge in using ReadTheDocs and Sphinx tools to write software documentation.
- To make the students and faculty develop their portfolio and make it available for the public to visit their portfolio using GitHubPages.
- To make the students & Faculty be able to write and share notes on the regular subjects to their peers and audience without hassle using ReadTheDocs and Sphinx.

Entry Requirements (Pre-requisites):

- Students & Faculty must have a basic understanding of computers and programming.
- Students & Faculty must have the basic understanding of Linux commands.