WORKSHOP-1

GETTING STARTED WITH GIT:-

1. What is a version control system ? Name some version control systems?

Version control, also known as source control, is the practice of tracking and managing changes to software code. Version control systems are software tools that help software teams manage changes to source code over time.

EX:- GIT , MERCURIAL , APACHE SUBVERSION

2. What is the difference between Centralized and distributed version control system.

• Centralized version control is easier to learn than distributed. If you are a beginner you’ll have to remember all the commands for all the operations in DVCS and working on DVCS might be confusing initially. CVCS is easy to learn and easy to set up.

• DVCS has the biggest advantage in that it allows you to work offline and gives flexibility. You have the entire history of the code in your own hard drive, so all the changes you will be making in your own server or to your own repository which doesn’t require an internet connection, but this is not in the case of CVCS.

• DVCS is faster than CVCS because you don’t need to communicate with the remote server for each and every command. You do everything locally which gives you the benefit to work faster than CVCS.

• Working on branches is easy in DVCS. Every developer has an entire history of the code in DVCS, so developers can share their changes before merging all the ‘sets of changes to the remote server. In CVCS it’s difficult and time-consuming to work on branches because it requires to communicate with the server directly.

3. What is git ?

Git is a free and open-source version control system. It is used to track changes in any set of files, most commonly used for coordinating work among programmers developing source code during software development.

Git is a distributed revision control system, which means that every developer has the full history of the code repository locally. This makes it easy to work offline or remotely, and to collaborate with other developers.

4. How git is different from Subversion, CVS, ClearCase version control systems ?

GIT is a free distributed version control system . while others like SUBVERSION , CVS , CLEARCASE VERSION CONTROL SYSTEM are centralized version control system .

5. Is git, git-hub same ?

Git: Git is a distributed version control system for tracking changes in source code during software development. It is designed for coordinating work among programmers, but it can be used to track changes in any set of files. Its goals include speed, data integrity, and support for distributed, non-linear workflows.

GitHub: GitHub is a web-based Git repository hosting service, which offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features.

6. What are the other git-hub like platforms based on git ?

GITLAB :- is a web-based platform that allows software development teams to plan, build, and ship secure code all in one application.

BITBUCKET:- is a Git-based code hosting and collaboration tool designed for teams. It offers unbeatable integrations with Jira and Trello, designed to bring the entire software team together to implement a project.

ONEDEV :- is a self-hosted Git server with built-in CI/CD and Kanban. It offers a range offeatures to support the entire software development lifecycle, including symbol navigation and code search.

GOGS:- is a self-hosted GIT SERVICE that aims to be simple, stable, and extensible. Written in Go, it’s designed to be easy to install and set up and can run on a variety of platforms, including Linux, macOS, Windows .

RADICLE :- is a sovereign code infrastructure that enables developers to securely collaborate on software over a peer-to-peer network built on Git.

7. What is ssh what is the purpose of authenticating your device with ssh and how is it different from your traditional username-password based authentication over http/s ?

Secure Shell (SSH) is a network security protocol that uses encryption and authentication mechanisms to implement services such as secure access and file transfer.

When you think of user access security, you might think of traditional security measures, like submitting your username and password. While these basic security measures may have protected you in the past, they’re not quite strong enough to withstand advanced attacks from today’s hackers.

Thus, many organizations are turning to SSH-key authentication to provide a greater level of security for SFTP SOLUTION compared to traditional password measures. In this article, we’ll look at what SSH-Key Authentication entails, and how this security measure protects your data better than other options.

Benefits of SSH over traditional username password based authentication :-

1. highly secure authentication method .

2. addresses vulnerabilities that come with password .

3. ensures only the permitted devices are used.

4. maintains security in the event of attack .

5. enables secure automation.

NAME :- V Akanksha Rao

ROLL NO :- FET-BAML-2023-27-059