Source Code Management Tools

(Part-1)

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Source Code Management Tools

- Source code management (SCM) tools help teams to track changes, manage branches, and collaborate on code. They can also automate workflows and provide a centralized place to store code.
- It is a software application that provides a centralized location for storing, managing, and versioning source code files .
- It helps team of developers work together on a codebase by allowing them to track changes, collaborate on features, and resolve conflicts when multiple developers make changes to the same files.

Benefits of Source Code Management Tools?

Source code management tools offers many benefits, including:

- Version control
- Collaboration
- Backups
- Traceability
- Improved Quality
- Streamlined Deployment

List of SCM Tools

- Github
- Git
- GitLab
- Bitbucket
- Apache Subversion
- Mercurial
- Azure Team Foundation Server

About Github

- GitHub is a web-based platform for version control and collaboration that helps developers work together on software projects.
- With GitHub, developers can store their code in a central repository and track changes using Git's powerful version control system.
- Supports Windows, Mac, and mobile devices.
- Developers use it for personal projects or to do experiments with new programming languages.
- Supports cloud-based deployment.
- GitHub provides security features like security incident response, two-factor authentication, etc.

Creating Github Account

- In browser go to https://github.com.
- Click on signup.
- Enter your Email address,Username and password.
- Choose whether to receive email updates and announcements.
- Click continue.
- Verify your account.
- Enter the code sent to your email address.
- Fill the personal details.
- Click on create account.

About Git

- Git is a popular, open-source source code management tool designed for distributed version control and collaboration. It allows developers to manage source code history and collaborate with their team on a project in a decentralized manner.
- With Git, developers can track changes to their code, revert to previous versions, and collaborate with others on the same codebase, even from different locations.
- It is Free and Open-source.
- Widely used and well supported by large community.

Setting up Git

- **Download and install Git:**You can check if Git is already installed by entering git-version in command prompt.
- **Set your username and email:**Replace [username] and [email] with your desired username and email address..
- **Create a new repository:**Use git init command to create a new repository and main branch.
- **Connect to Github repositories:**Authenticate with Github using HTTPS or SSH to connect to a repository.
- **Use Github Desktop:**If you prefer a visual interface,you can choose Github desktop,which comes with git pre-installed in it.
- **Use Git in VS Code:**Make sure Git is installed in your computer,then restart VS Code.You can sign in to VS Code with your Github account to enable additional features.