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**Research 1b: Source Control**

**Git:**

-Data Structure makes it lightweight and space-efficient.

**-** Allows Developers to work offline and merge changes later.

-Branching and merging capabilities that allow parallel development.

- Lots of popular platforms for hosting are built around git like GitHub, GitLab, and Bitbucket.

**Subversion (SVN):**

**-**Relies on a central repository (CVCS)

-Uses traditional locking mechanism to prevent conflicts when multiple users edit the same file.

- Allows atomic commits, which enable multiple file changes in one transaction.

- Good at managing large binary files and content that isn’t text.

**Mercurial:**

-Distributed version control system like Git.

-Branching and merging operations

-User friendly/ Built in web interface to browse repositories

**Perforce:**

-CVCS

- Access controls that let admin define permission for users.

-Large file support

- Integration tools like Task Tracking, Issue Management, and Code Review

-Parallel Development

**Team Foundation Server (TFS):**

**-**Has been replaced by Azure DevOps

- Supports Agile and Scrum

-Microsoft Ecosystem Integration

-Extensibility and Integration which supports various third-party tools/services.

-On Premises deployment that allows for organizations to have more control over infrastructure/data.