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**IT 497**

**Google Drive**

Google offers Google Docs, a word processing web application, Google Sheets, a spreadsheet web application and Google Slides, a presentation web application. All three of these services reside within Google Drive; an online document storage platform. Google also offers, Forms, Drawings and Tables within the their office suite but I will primarily be focusing on Docs, Sheets and Slides.

Docs, Sheets and Slides allow users to create documents, share documents with other Google Drive users and to view revisions made to documents and who those revisions were made by. Because documents reside within Google Drive and the editors are all web-based, real-time edits can be observed.

Google Drive apps are ideal for collaborating on research or papers. A user has immediate access to the latest revision of the document upon opening. All edits done within web based editors are logged and real-time edits can be observed. The risk of changing a portion of the document that was recently changed is minimal because all changes are logged in the sidebar.

Google Drive apps are less ideal for programming projects. Using an online editor for programming would be difficult . However the Google Drive storage features would work well. It would be possible to determine when a document was last created for version control and Google offers the ability to map a Google drive as a local folder, allowing you to use a shared directory as a repository.

Google Drive apps excel as a collaboration tool or individual tool for research or papers.

**Github**

Developers have often encountered the problem of maintaining code while many, sometimes geographically disparate individuals or groups are working on a single project. They may be editing various sections of the code that may overlap. Keeping all of this code straight and ensuring that simultaneous edits do not interfere has always been a problem. Github is based around the old command line utility called Git. Git was one of the original version control applications but was only a command line utility on Unix systems. Github is essentially a graphical, collaborative version of Git.

Github allows you to create a repository for a project, essentially a directory where all files for a project will be kept. When a new version of a file is uploaded or committed Github determines the differences between new version of the files committed and files already existing in the repository. All changes are tracked and copies of the old files are maintained in the event that you choose to revert to an older version of a file.

This system is useful when working on a project individually because you will be able to revert to older versions of a project but Github’s value becomes apparent when working on projects with multiple parties.

Github’s style of version control may be useful when working on non-programming projects such as research papers or projects. Individuals may download the current version of the paper, make changes and upload the paper for the other parties to continue working on. Contributions by team members to papers or research will be logged and Github’s revision control system.

Github offers value when using it for individual or group research but is extremely powerful for collaboration on group programming projects.