CSE 210: Programming with Classes

Intructor: Nathan Parrish

September 25, 2024

**What is version control and why is it important?**

Version control refers to a file management system that keeps track of changes made to an application. In other words, any records system that is put in place to keep track of changes can be referred to as a version control system. However, these are typically done electronically to better manage data, and improve usability, and the retrieval of data.

With that being said, one of the number one benefits of version control--is that it allows us to go back to a particular moment in time, or time stamp when changes were last made to an existing application. This can be beneficial to many people including developers as it allows them to have more control over their files and programs since they can go back in time to view previous versions of their files and programs, which can help significantly, especially in the event their program becomes corrupted, they can go back to previous versions to better analyze the data when searching for bugs in their program that was made since the last working version.

In addition to this, the version control system also allows users to edit past versions of the file or program that they are working on and to save the changes in real-time. The user can also delete unwanted versions of the file or program, make backup copies, and more.

There are many examples of version control systems that use various features to allow users to keep track of their changes. For example, Microsoft Word is a program from Microsoft that enables users to keep track of changes and to view version control. A practical example of this is that a user can enable the tracking feature when using the application by using the command **Ctrl+Shift+E** to track changes made on the document. Another example of a version control system is GitHub, as developers can use **git init** command to manage and set up their version control system, which also allows them to keep track of their changes made to their project or program.