

Version Control

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1 Collaboration in Software Development

2 Version Control

- Using Git
- Using CVS

Collaboration in Software Development

Often as a software developer you will have to work with a team of other developers when creating programs.

One of the problems posed by working in a team is that you and your team members may have to edit the same files. Some of the reasons this can be problematic are:

- If two people simultaneously make changes to the same file one person's work may be lost.
- Someone on the team can accidentally make a change or delete a file that breaks another members code.
- It can be difficult to keep your files up to date with the newest revision when changes are being made frequently.

Methods of Working with Shared Files

There are several ways you can deal with having to work with the same files as your team members (not all of them good):

- Alternate the times when each team member works and send updated files to team members whenever you are done with them.
- Get one person to do all the coding.
- Work on only one computer, using the same keyboard, *at the same time*.
- Use some form of version control software.(Recommended)

Version Control Software

Version control software allows developers to store their code in a central location that all team members can access, allowing each team member to *checkout* files keeping their own local versions up to date and *commit* changes to the repository so that other members can work with code they have updated. Changes made to the source code can be tracked and, if necessary, reverted.

Using Git

Git is a source code management system that has been made easy to use by hosting service GitHub (github.com). GitHub provides an application that allows you to easily set up projects and use version control.

Using CVS

Concurrent Versions System (CVS) is a form of version control that has been taught in previous offerings of this course.

Guide on CVS : [cvs.pdf](#)

The End