

Software Problem Solving

CSC 4700 Software Engineering

Common Problem Scenarios

- Software product needs a new feature that nobody knows how to do
- Project manager wants product based on some underlying tool or development environment
- Client wants something but has no working example or idea is poorly defined
- You need to learn a new language or tool and have a few weeks "between projects"

Solution 1 – Open Source

- You don't know what code to use
- **Open source** – find working example that does some or all of what you want
 - Code Project
 - Source Forge
 - Google search
 - Many other sources – you will develop your favorites
 - Ask around

Solution 2 – Learn the Pkg

- You already know the intended software package or IDE
 - Download it
 - Run it
 - Play around with it
 - Try some of the tutorials
 - Get it to do something useful
 - Prepare to “grow” the solution

Solution 3 – Trial and Error

- Nobody knows exactly what they want
- Create a prototype using easiest method avail
 - Seek comment
 - Improve based on comment, or on your own
 - Repeat
 - Collect ideas for how to do it “for real”
 - Keep notes in a file
 - Keep notes in comment block at top of code
 - Keep notes in all your saved emails

Solution 4 – Targeted Play

- Productively filling time “between projects”
 - Listen for good ideas – company meetings, sales people, fellow developers
 - Listen for new tools – download and try
 - Pick or come up with a small, useful or fun idea – create it using the new tool
 - Always be thinking of how you could feed back your new idea and experience into your company or project
