A Practical Approach to 'Secure Software Architecture' in Software Engineering

Time	Topic	Presenter & Overview
9:00-9:30	Coffee and chat	
9:30-9:40	Intro & housekeeping	**Peter Davis**
9:40-10:00	Making VSCode work for you and your students. A simple do-it-all IDE for all Software Engineering projects.	**Ben Jones** Overview of VSCode capabilities and teachers will set up a Python profile with helpful extensions for Python Flask.
10:00-10:20	Morning tea	
10:20-11:00	Ben Jones (ITD) views from a Software Architect and Director of Networks and Monitoring.	**Ben Jones (ITD)** Teachers will attend a presentation by Ben Jones, an experienced Software Architect who is currently the Director of Networks and Monitoring with the NSW Department of Education ITD.
11:00-12:00	Overview of Python Flask	**Daniel Covassin & Ben Jones** An overview of the basics of FLASK focusing on its architecture, debugging and the built-in Janga2 template engine. Teachers develop a simple Flask app with a GET app route, template and partial.
12:00-13:15	Practical software security activities	**Ben Jones** Demonstration, discussion and testing of exploits/vulnerabilities listed in the syllabus. Teachers will test the different exploits on the Unsecured PWA and discuss/apply potential countermeasures.
13:15-13:40	Lunch	
13:40 - 2:40	Practical software security activities	**Daniel Covassin** Demonstration, discussion and testing of 'Broken Authentication and Session management'. Teachers will implement a login algorithm with two-factor authentication (2FA) to their Flask App.
2:40-3:00	GitHub demo	**Ben Jones** Overview of GitHub to support cloud-based programming and easily address collaboration syllabus content. Teachers will have an opportunity to open a GitHub account and deploy their app in a codespace.
3:00-3:40	Andrew Jackson, Manager Cyber Response and Digital Forensics ITD	**Andrew Jackson** Teachers will attend a presentation from Andrew Jackson, Manager of Cyber Response and Digital Forensics with the NSW Department of Education ITD. Andrew will share his real-world experience with concepts in our syllabus, including vulnerabilities, mitigations, and pen testing.
3:40-3:45	Evaluation and close	**Peter Davis**

Resources: https://github.com/TempeHS/Upskilling_for_SE_Teachers_Resources

Dependencies: VSCode (eT4L Software Catalogue or https://code.visualstudio.com/), Python (eT4L Software Catalogue or https://www.python.org/), Git (eT4L Software Catalogue or https://git-scm.com/), GitHub Desktop (eT4L Software Catalogue or https://desktop.github.com/download/)