

Experiences with Exploratory Programming Tasks (xyes, xjson, xgui, xtcp).

xyes

The task 'xyes' was a simple programming task, not requiring any external libraries and only needing simple usage of stdin and stout. There isn't much to say about it, as it was little more than a 'Hello World' program with some window dressing.

Xjson

Xjson was slightly trickier to work with than xyes. While Python supports a highly functional json library, the specific requirement of the program to process a stream of well-formed json made the task a little challenging. A method had to be found to differentiate json values from one another, but it wasn't hard.

Xgui

Very little to say about this one. PyQt5 is a very simple library, and included with our sciris Python installation, and had functions to perform all of the functionality required of xgui.

Xtcp

Our installation of Python on sciris lacks any networking libraries. So the options were to either create a Python virtual environment, or use the os module to run a netcat listener inside of Python. I opted for the former. This is the only program to have provided me significant trouble, as it appears that netcat clients disconnect from my xtcp server before receiving a reply when stdin is piped into the netcat command.