

Creating high-coverage test suites for AVL Trees in Python, PNG Graphics in C, and Data Visualization in Java involved distinct challenges. For AVL Trees (HW1a), I manually crafted test sequences and modified the provided starter suite to achieve comprehensive statement and branch coverage. PNG Graphics (HW1b) posed challenges due to the large codebase and compilation intricacies. I used existing .png files from libpng and online sources to attain extensive statement coverage using gcov. Data Visualization (HW1c) required creating .java files for JFreeChart, dealing with a complex API and Java-related dependencies. HW1c was harder than I expected to make total branch coverage rate higher.

Despite differences, all programs emphasized the importance of coverage metrics. The assignment provided valuable insights into testing diverse software systems and adapting concepts across languages and domains.