

First, I attempted to build my test cases using XCodes code coverage tools. I would never recommend anyone else to use this. After failing at this, I built my test cases in a separate file and then ran them against my code.

The first issue I came across when using llvm for code coverage was inline vector declarations (`shape = {splitBySpace.at(i), ... (i+5)}`;) caused an error in command: `clang++ -fprofile-instr-generate -fcoverage-mapping main.cpp -o main`. Instead of installing another version of llvm I also added `xcrun` to the last two commandlines:

```
xcrun llvm-profdata merge -sparse main.profraw -o main.profdata
xcrun llvm-cov show ./main -instr-profile=main.profdata
```

I found several check lines: such as:

```
if(i > splitBySpace.size()) {
    return;
}
```

Which never executed because I never entered invalid inputs in my original testing. My methods that I used during build were also untested; such as printing vectors as I built them. It also flagged code which I had commented out. I'm not sure if this was an error on my part or part of the flagging process.