

# Verification and Validation Plan for VDisp Software

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To verify the validity of the *VDisp* software, we came up with various Unit and System tests. The Settlements Analysis textbook (linked in *README.md* file) outlined four very good sample input files, with their expected outputs already displayed. These were the perfect starting points in terms of system tests, however they did not cover many possible input combinations. Thus, we had to come up with many of our own system tests. This document outlines the details of the Unit and System tests used to verify the *VDisp* software.

## System Tests

We explain the system tests used in the validation and verification of the *VDisp* software below.

### Test Input Files from Appendix F

In Appendix F of the Settlements Analysis Textbook, under section (F-3) on p.171, there are 4 sample input files along with their respective expected outputs. We copied these input files, storing them in the directory located at “*vdisp/test/testdata*”. We made our *InputParser* module parse each of these files, making sure no errors arose and that each piece of data was parsed correctly. The test cases can be found in the *runtests.jl* file.