



# WPI

## **Read Eval Print Loop and User Interface for the DEX Security Policy Configuration Language**

A Major Qualifying Project

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in

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# Abstract

Shape Security is a division of F5 that focuses on online fraud and malicious attack prevention. To configure some of their security policies, Shape uses a functional programming language known as DEX. However, DEX lacked a live programming environment which supported all the features of DEX. To address this, we sought to develop a Read Eval Print Loop, or REPL, for DEX that would provide interactive programming for developers. We built off of an existing DEX tool to create both a command line REPL and a web-based REPL with a UI. These REPLs exceeded the expectations for the project and provided a new development environment that improves upon existing DEX development tools. This new REPL should make development with DEX more streamlined and allow for the testing of some DEX features that were not previously possible.