Test Plan

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Description

A pair of programs, a dispatcher and a listener, will act as a communication relay. The program dispatcher passively accepts text from standard input, exiting normally on EOF. The program listener will print out any text that was sent to a running instance of dispatcher. When dispatcher exits, so too does listener.

Automated Test Cases

Automated tests may be executed with make check. This will both build the tests and run them. These are all unit tests of functions.

Common Test Cases

Prerequisites: relay directory does not already exist

TC1: Installation

1. git clone git@git.umbc.tc:tdqc/tdqc12/rsoto/relay.git
2. cd relay
Expected: relay directory is created

Prerequisites: In the projects directory

TC2: Correct branch

1. git branch
Expected: main is default branch

TC3: Build Cleaning

1. make
2. make clean
3. ls *.o
Expected: No such file or directory error

Prerequisites: relay directory does not already exist

"Project" Test Cases

Prerequisites: In the projects directory; make clean

TC4: Build Explicit

1. make dispatcher OR make listener
2. ls dispatcher OR ls listener
Expected: file is listed

TC5: Build Implicit

1. make
2. ls dispatcher
3. ls listener
Expected: file is listed

TC6: Build Debugging

1. make debug
2. readelf –debug-dump=decodedline dispatcher
3. readelf –debug-dump=decodedline listener Expected: debugging info is listed

TC7: Build Cleaning

1. make
2. make clean
3. ls dispatcher
4. ls listener Expected: No such file or directory error

Prerequisites: In the project's directory; make

TC8: No command line arguments

1. ./dispatcher
2. echo $?
3. ./listener
4. echo $?
Expected: program exits with proper output

TC9: with command line arguments

1. ./dispatcher arguments
2. echo $?
Expected: program exits with usage error

TC10: with l flag set

1. ./dispatcher -l num
2. echo $?
Expected: program exits with proper output and sets the limit for connections

TC11: with b flag set

1. ./dispatcher -b
2. echo $?
Expected: Program reads from stdin without buffering by line