Fibonacci - Test Plan

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Project Summary

The task is to write a program in x86 assembly language that uses the first command-line parameter as a number N from 0 through 100. The program should print out F(N), in hexadecimal.

Automated Test Cases

Automated tests may be executed with `make check`. If the tests don't run, ensure that the executable bit is set on `test/check.sh`.

Common Test Cases

0.0.1 TC1: Installation

Prerequisites: `fibonacci` directory does not already exist

1. `git clone git@git.umbc.tc:tdqc/tdqc12/jviner/fibonacci.git`
2. `cd fibonacci`

Expected: `fibonacci` directory is created

0.0.2 TC2: Correct Branch

Prerequisites: In the project's directory

1. `git branch`

Expected: `main` is default branch

0.0.3 TC3: Build Cleaning

Prerequisites: In the project's directory

1. `make`
2. `make clean`
3. `ls fibonacci`

Expected: No such file or directory error

0.0.4 TC4: Build Explicit

Prerequisites: In the project's directory; `make clean`

1. `make fibonacci`
2. `ls fibonacci`

Expected: `fibonacci` executable is listed

0.0.5 TC5: Build Implicit

Prerequisites: In the project's directory; `make clean`

1. `make`
2. `ls fibonacci`

Expected: `fibonacci` executable is listed

0.0.6 TC6: No Command-line Arguments

Prerequisites: In the project's directory; `make`

1. `./fibonacci`
2. `echo $?`

Expected: Program exits with usage error and error code

0.0.7 TC7: Invalid Command-line Arguments

Prerequisites: In the project's directory; `make`

1. `./fibonacci -2`
2. `echo $?`

Expected: Program exits with usage error and error code

0.0.8 TC8: Normal Run

Prerequisites: In the project's directory; `make`

1. `./fibonacci 7`
2. `echo $?`

Expected: Program runs, outputs `0xd`, and exits normally

0.0.9 TC9: Octal Output Option

Prerequisites: In the project's directory; `make`

1. `./fibonacci -o 7`
2. `echo $?`

Expected: Program runs, outputs `0o15`, and exits normally

0.0.10 TC10: Decimal Output Option

Prerequisites: In the project's directory; `make`

1. `./fibonacci -d 7`
2. `echo $?`

Expected: Program runs, outputs `13`, and exits normally