

GnuCOBOL 1.1 [20JAN2014 version]

Test Guide for MinGW - Minimalist GNU for Windows

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Please refer to the excellent manual written by Gary Cutler (CutlerGL@gmail.com) as a starting point for building GnuCOBOL 1.1:

OpenCOBOL-1.1-06FEB2009-Build-Guide-For-MinGW.pdf

<http://www.mediafire.com/file/csc7gufle77tgsg/OpenCOBOL-1.1-06FEB2009-Build-Guide-For-MinGW.pdf>

This manual is also included in the GnuCOBOL 1.1 MinGW installer and can be found in the "documentation" folder.

Testing the GnuCOBOL 1.1 compiler

After building the GnuCOBOL 1.1 compiler with MinGW you can perform the following steps to test the compiler. You will need to use the MSYS bash shell, and you will need the "tests" folder installed using the **GnuCOBOL-1.1-20JAN2014-MinGW-Setup.exe** install program.

There are two test suites, one containing only GnuCOBOL tests, and one in the "tests/cobol85" folder containing the NIST COBOL85 test suite (National Institute of Standards and Technology). There is a separate README file in the "tests/cobol85" folder for the NIST tests.

PERL required for NIST COBOL85 test suite

Note that the NIST COBOL85 test suite requires PERL, which you will need to install separately. One easy to install PERL interpreter is Strawberry PERL 32bit portable ZIP for Windows, which can be found at the following URL:

<http://strawberryperl.com/releases.html>

The portable Strawberry PERL was unzipped to a folder named "C:\myperl". I created a command file for preparing the PATH to run the NIST COBOL85 test suite, named "setperl.cmd", in order to place the GnuCOBOL compiler before the PERL interpreter:

```
C:\GnuCOBOL\bin;C:\myperl\perl\site\bin;C:\myperl\perl\bin;C:\myperl\c\bin
```

The "setperl.cmd" script must be run from the folder containing the GnuCOBOL compiler, which in my case was "C:\GnuCOBOL", but your path may be different. After running "setperl", you should close the CMD.EXE window before starting MSYS.

If PERL is ahead of GnuCOBOL in the PATH, the compiler test suites will fail.

WARNING: Before running the Compiler test suites you should **disconnect** from the internet, close all browsers, and temporarily **disable your Anti-virus or security** program. The test suites generate hundreds of EXE files which your anti-virus may scan one by one. Without the AV scan the GnuCOBOL test suite and the NIST COBOL85 test suite should each run in about 10 to 20 minutes.

Remember to re-enable your security software after completing the compiler tests.

The next step is to start **MSYS** and navigate to the "tests" folder. The MSYS command would look like this (depending on the actual path to your GnuCOBOL compiler folder):

```
cd /c/GnuCOBOL/tests
```

There are several commands for running the compiler tests:

```
make clean-all      (clean everything possible for both test suites)
make all             (run both GnuCOBOL and NIST COBOL85 test suites)
make check          (run only the GnuCOBOL test suite)
```

You can choose to run both test suites by entering the "make all" command or to run just the GnuCOBOL test suite by entering the "make check" command.

The results of the GnuCOBOL test suite will be saved in a file named "testsuite.log" and stored in the "tests" folder.

Like other text files associated with the MinGW/GnuCOBOL environment, "testsuite.log" uses Unix LF record delimiters rather than Windows CRLF delimiters. These files are best viewed with editors that display either LF or CRLF as record delimiters, such as Microsoft Wordpad, or Notepad++.

Notepad++ can be found at: <https://sourceforge.net/projects/notepad-plus/>

The "testsuite.log" file from the GnuCOBOL tests will be quite large. There are three sections within the GnuCOBOL tests:

1. syntax - 77 tests, with none failing
2. run - 198 tests, with 1 skipped, and 8 failing (run twice, with and without "-O").
3. data-rep - 17 tests, with none failing (run twice, with and without "-O").

The skipped test should be:

```
First READ on empty SEQUENTIAL INDEXED file
```

The eight failed GnuCOBOL tests should be:

```
Dynamic call with static linking
FUNCTION ANNUITY
FUNCTION EXP
FUNCTION LOG
FUNCTION LOG10
FUNCTION SQRT
FUNCTION STANDARD-DEVIATION
FUNCTION TAN
```

NIST COBOL85 Test Suite

If you choose to run the NIST COBOL85 tests separately, you will need to navigate to the "tests/cobol85" folder in MSYS using a command similar to the following (depending on your actual path):

```
cd /c/GnuCOBOL/tests/cobol85
```

In the "tests/cobol85" folder there are four "make" commands for the NIST COBOL85 test suite:

```
make clean      (cleaning from a previous test)
make test       (to run the NIST COBOL85 test suite)
make save       (save test reports in *.txt)
make diff       (diff from *.txt to the last reports)
```

Enter the "make test" command to run the NIST COBOL85 test suite by itself. If you need to rerun the test suite, enter "make clean" and then "make test".

The NIST COBOL85 test suite compiles and executes a large number of programs grouped into ten modules. If all goes well there should be a file created in the "tests/cobol85" folder named "summary.log". The contents of "summary.log" should look something like this:

| ----- Directory Information ----- | | | | | --- Total Tests Information --- | | | | |
|-----------------------------------|----------|----------|-------|-------|---------------------------------|------|---------|---------|-------|
| Module | Programs | Executed | Error | Crash | Pass | Fail | Deleted | Inspect | Total |
| NC | 92 | 92 | 0 | 0 | 4374 | 0 | 6 | 11 | 4391 |
| SM | 15 | 15 | 0 | 0 | 290 | 0 | 3 | 1 | 294 |
| IC | 24 | 24 | 0 | 0 | 246 | 0 | 4 | 0 | 250 |
| SQ | 81 | 81 | 0 | 0 | 512 | 0 | 6 | 81 | 599 |
| RL | 32 | 32 | 0 | 0 | 1827 | 0 | 5 | 0 | 1832 |
| IX | 39 | 39 | 0 | 0 | 507 | 0 | 1 | 0 | 508 |
| ST | 39 | 39 | 0 | 0 | 314 | 0 | 0 | 0 | 314 |
| SG | 5 | 5 | 0 | 0 | 193 | 0 | 0 | 0 | 193 |
| OB | 5 | 5 | 0 | 0 | 16 | 0 | 0 | 0 | 16 |
| IF | 42 | 42 | 0 | 0 | 732 | 0 | 0 | 0 | 732 |
| Total | 374 | 374 | 0 | 0 | 9011 | 0 | 25 | 93 | 9129 |

I found that I had to run the NIST test suite twice to ensure the summary.log file was created.

Also, including the "termio.c" patch described in Gary Cutler's build manual corrected 8 failing test cases in the NIST COBOL 85 test suite.

Remember to re-enable your anti-virus or security software after completing the compiler tests and before reconnecting to the internet!