



July 8, 2018

c:\Articles\Forward Tracing.docx

Link Name=Do Forward Tracing

Forward Tracing

Structured Programming in COBOL involves the PERFORM verb. Except in rare instances, Performs control the logic hierarchy of the program. What happens to a data-name or the record it is in, ultimately cannot be determined unless FORWARD and BACKWARD Tracing of performed routines is followed at the same time as following the data field activity. [See Analyzing a COBOL Data Name during maintenance](#) for following data field activity.

A visual view of the performed routines makes following the COBOL program much easier and analyzing data flow more complete.

Paragraphs or Section names that are not performed are not included in this reporting.

The following is a view of Marble's Control/DCD's FORWARD TRACING.

```

#FORWARD TRACING      &FORWARD-TRACING
1      1231      &PROGRAM-ENTRY
2      1267      &C-BUILD-NARR-FILE-TO-MERGE
3      1289      &M-MERGE-THREE-FILES-TO-ONE
4      1560      &FILEIO-ERROR-ROUTINE --> (4 Performs)
5      1331      &N-SORT-INPUT-PROCEDURE
6      1387      &N220-LOOK-FOR-MATCH --> (Perform/UNTIL)
7      1408      &N410-TEST-SEQ-IN-RANGE --> (Perform/VARYING)
(See #4)      FILEIO-ERROR-ROUTINE
8      1453      &P-SORT-OUTPUT-RTN
9      1467      &P-VERIFY-TABLE --> (Perform/TIMES)
10     1502      &Z-END-ROUTINE

```

Notes on Forward Tracing

- To allow searching on a Performed Routine in this analysis an & precedes the Performed-Name
 - A FIND on &N-SORT-INPUT-ROUTINE, allows Forward Tracing from just that routine
- Indentation of 2 characters, allows understanding the hierarchy of the Performed Routines
- Use of **UNTIL**, **VARYING** and **TIMES** clauses are shown on right side of Routine
- Multiple PERFORMs of one routine within a higher level PERFORM are shown. See **(4 Performs)**
- When a PERFORM routine is performed from a later routine, an entry **(See #n)** is shown

Forward Tracing is available in the DDM (Digital Documentation Manual) available off the mainframe in PDF format and also on the mainframe in CSE (COBOL SOURCE ***EDITOR?***).

A reduced Forward Tracing report is also available for each Data Field on the DDM. See 'Narrative – Analyzing a COBOL Data Name during maintenance' on the Marble Computer website: www.marblecomputer.com.

Want to know more? Contact us today. Call 1-800-252-1400 ext. #4 or send an email to sales@marblecomputer.com