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*****
** SAMPLE CALLABLE SERVICE PROGRAM. **
** SHARE SESSION: INTRODUCING LE CALLABLE SERVICES **
** THOMAS PETROLINO **
** IBM LANGUAGE ENVIRONMENT **
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*****
IDENTIFICATION DIVISION.
PROGRAM-ID. CSSQRTCB.

DATA DIVISION.
WORKING-STORAGE SECTION.
*****
** DEFINE SPACE FOR A LANGUAGE ENVIRONMENT FEEDBACK **
** CODE. 12 TOTAL BYTES **
** INCLUDE A COPY OF CEEIGZCT TO GET PRE-DEFINED **
** LANGUAGE ENVIRONMENT CONDITION TOKENS. **
*****
01 FC.
02 CONDITION-TOKEN-VALUE.
COPY CEEIGZCT.
03 CASE-1-CONDITION-ID.
04 SEVERITY PIC S9(4) BINARY.
04 MSG-NO PIC S9(4) BINARY.
03 CASE-SEV-CTL PIC X.
03 FACILITY-ID PIC XXX.
02 I-S-INFO PIC S9(9) BINARY.
*****
** DEFINE SOME STORAGE TO BE USED BY THE LANGUAGE **
** ENVIRONMENT MATH CALLABLE SERVICES. **
*****
01 MY-INPUT COMP-1.
01 RESULT COMP-1.
01 RESULT2 PIC ZZZZ.99.
*****
** DEFINE SOME STORAGE TO BE USED BY THE LANGUAGE **
** ENVIRONMENT MESSAGING CALLABLE SERVICES **
*****
01 MSG-DEST PIC S9(9) BINARY VALUE 2.
01 MY-MSG-STRING.
02 MY-STRING-LEN PIC S9(4) BINARY.
02 MY-STRING-TEXT.
03 MY-STRING-CHAR PIC X(256).
01 MY-OUTPUT-STRING.
02 MY-OUTPUT-STRING-LEN PIC S9(4) BINARY VALUE 38.
02 MY-OUTPUT-STRING-TEXT PIC X(19)
VALUE "THE SQUARE ROOT OF ".
02 MY-OUTPUT-STRING-INPUT PIC ZZZ9.99.
02 MY-OUTPUT-STRING-TEXT2 PIC X(5) VALUE " IS: ".
02 MY-OUTPUT-STRING-RESULT PIC ZZZ9.99.
*****
** DEFINE SOME STORAGE TO BE USED BY THE LANGUAGE **
** ENVIRONMENT CEE3DMP CALLABLE SERVICE **
*****
01 DUMP-TITLE PIC X(80).
01 DUMP-OPTIONS PIC X(255).
*****
** DEFINE SOME STORAGE TO BE USED BY THE LANGUAGE **
** ENVIRONMENT DATE/TIME CALLABLE SERVICES **
*****
01 MY-DATE-LILIAN PIC S9(9) BINARY.
01 MY-SECS-LILIAN COMP-2.
01 MY-TIME-GREGORIAN PIC X(17).
01 MY-PIC-STRING.
02 MY-PIC-LEN PIC S9(4) BINARY.
02 MY-PIC-TEXT.
03 MY-PIC-CHAR PIC X(256).
01 MY-TIMESTAMP PIC X(80).

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00010002
00020002
00030002
00040002
00050002
00051002
00052002
00060000
00070004
00080000
00090000
00100000
00110002
00120002
00120102
00120202
00120302
00120402
00120502
00120602
00120702
00120802
00120902
00121002
00121100
00121200
00121300
00121402
00121502
00121602
00121902
00126000
00129000
00129100
00129202
00129302
00129402
00129502
00129600
00129700
00129800
00129900
00130005
00130403
00130503
00130603
00130703
00130803
00130903
00131003
00131102
00131202
00131302
00131402
00131500
00131600
00131702
00131802
00131902
00132002
00132101
00132201
00132301
00132401
00132505
00132605
00132705
00133101

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*****
**  DEFINE SOME STORAGE TO BE USED BY CEE3ABD          **
*****
01  ABDCODE          PIC S9(9) BINARY.
01  TIMING           PIC S9(9) BINARY.
*****
**  START SOME REAL CODE NOW...                        **
*****
PROCEDURE DIVISION.
MAIN-PROG.
*
* *****
* ** SET UP DUMP-TITLE AND DUMP-OPTIONS FOR          **
* ** CEE3DMP CALL.                                  **
* *****
*   MOVE "SAMPLE DUMP TAKEN BY CEE3DMP." TO DUMP-TITLE.
*   MOVE "NOCOND" TO DUMP-OPTIONS.
* *****
* ** SET UP ABDCODE AND TIMING FOR CEE3ABD CALL      **
* *****
*   MOVE 1234 TO ABDCODE.
*   MOVE 0 TO TIMING.
* *****
* ** NOW CALL CEEOCT. IT RETURNS LOCAL TIME AS:      **
* **   DAYS SINCE OCT 14, 1582.                      **
* **   SECONDS SINCE OCT 14, 1582                    **
* **   TIME STRING OF THE FORM YYYYMMDDHHMISS999**
* **   FEEDBACK CODE                                 **
* ** REPORT ERROR AND STOP IF CEEOCT FAILS.         **
* *****
*   CALL "CEEOCT" USING MY-DATE-LILIAN, MY-SECS-LILIAN,
*   MY-TIME-GREGORIAN, FC.
* IF NOT CEE000 OF FC THEN
* *****
* ** USE CEEMSG TO DISPLAY LANG. ENV. MESSAGE      **
* *****
*   CALL "CEEMSG" USING FC, MSG-DEST, OMITTED
* *****
* ** CALL CEE3DMP TO PRODUCE CEEDUMP                **
* *****
*   CALL "CEE3DMP" USING DUMP-TITLE, DUMP-OPTIONS, FC
*   CALL "CEE3ABD" USING ABDCODE , TIMING.
* END-IF.
* *****
* ** MOVE A PICTURE STRING INTO MY-PIC-STRING SO    **
* ** WE CAN CALL CEEDATM TO CONVERT THE TIME        **
* *****
*   MOVE 22 TO MY-PIC-LEN.
*   MOVE "MM/DD/YYYY HH:MI:SS AP" TO MY-PIC-TEXT.
* *****
* ** NOW CALL CEEDATM. INPUT: LILIAN SECONDS        **
* **   PICTURE STRING                                **
* **   IT RETURNS:                                   **
* **   INPUT DATE/TIME AS A CHARACTER STRING.        **
* **   FEEDBACK CODE                                 **
* ** REPORT ERROR AND STOP IF CEEDATM FAILS.        **
* *****
*   CALL "CEEDATM" USING MY-SECS-LILIAN,
*   MY-PIC-STRING,
*   MY-TIMESTAMP, FC.
* IF NOT CEE000 OF FC THEN
* *****
* ** USE CEEMSG TO DISPLAY LANG. ENV. MESSAGE      **
* *****
*   CALL "CEEMSG" USING FC, MSG-DEST, OMITTED
* *****
* ** CALL CEE3DMP TO PRODUCE CEEDUMP                **
* *****
*   CALL "CEE3DMP" USING DUMP-TITLE, DUMP-OPTIONS, FC

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00133206
00133306
00133506
00133606
00133706
00133802
00133902
00134002
00135000
00140000
00140102
00140202
00140302
00140402
00140502
00140602
00140706
00140806
00141006
00141106
00141206
00141302
00141402
00141502
00141602
00141702
00141802
00141902
00142002
00142102
00142202
00142302
00142402
00142502
00142602
00142702
00142802
00142902
00143002
00143102
00143206
00143302
00143402
00143502
00143602
00143702
00143805
00143905
00144002
00144102
00144202
00144302
00144402
00144502
00144602
00144702
00144802
00144902
00145002
00145102
00145202
00145302
00145402
00145502
00145602
00145702
00145802
00145902

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*          *****                                00218903
*          ** USE CEEMSG TO DISPLAY LANG. ENV. MESSAGE **          00219003
*          *****                                00219103
*          CALL "CEEMSG" USING FC, MSG-DEST, OMITTED                00219203
*          *****                                00219303
*          ** CALL CEE3DMP TO PRODUCE CEEDUMP **                    00219403
*          *****                                00219503
*          CALL "CEE3DMP" USING DUMP-TITLE, DUMP-OPTIONS, FC        00219603
*          CALL "CEE3ABD" USING ABDCODE , TIMING                     00219706
*          END-IF.                                                  00219803
*          *****                                00220102
*          ** SETUP TO CALL CEESSTQT WITH 2500 AS INPUT. **        00220202
*          *****                                00220302
*          MOVE 2500 TO MY-INPUT                                     00220402
*          *****                                00220502
*          ** NOW CALL CEESSTQT. INPUT: 2500 **                    00220602
*          **                                     IT RETURNS: **    00220702
*          ** FEEDBACK CODE **                                     00220802
*          ** RESULT **                                          00220902
*          ** REPORT ERROR AND STOP IF CEESSTQT FAILS. **        00221002
*          *****                                00221102
*          CALL "CEESSTQT" USING MY-INPUT, FC, RESULT.             00221202
*          IF NOT CEE000 OF FC THEN                                  00221302
*          CALL "CEEMSG" USING FC, MSG-DEST, OMITTED                00221402
*          CALL "CEE3DMP" USING DUMP-TITLE, DUMP-OPTIONS, FC        00221502
*          CALL "CEE3ABD" USING ABDCODE , TIMING                     00221606
*          END-IF.                                                  00221702
*          *****                                00221802
*          ** DISPLAY THE OUTPUT. **                                00221902
*          *****                                00222002
*          MOVE RESULT TO MY-OUTPUT-STRING-RESULT.                 00222103
*          MOVE MY-INPUT TO MY-OUTPUT-STRING-INPUT.                00222203
*          *****                                00222303
*          ** NOW CALL CEEMOUT. INPUT: STRING TO WRITE **          00222403
*          **                                     DESTINATION **    00222503
*          **                                     IT RETURNS: **    00222603
*          ** FEEDBACK CODE **                                     00222703
*          ** REPORT ERROR AND STOP IF CEEMOUT FAILS. **          00222803
*          *****                                00222903
*          CALL "CEEMOUT" USING MY-OUTPUT-STRING, MSG-DEST, FC.    00223003
*          IF NOT CEE000 OF FC THEN                                  00223103
*          *****                                00223203
*          ** USE CEEMSG TO DISPLAY LANG. ENV. MESSAGE **          00223303
*          *****                                00223403
*          CALL "CEEMSG" USING FC, MSG-DEST, OMITTED                00223503
*          *****                                00223603
*          ** CALL CEE3DMP TO PRODUCE CEEDUMP **                    00223703
*          *****                                00223803
*          CALL "CEE3DMP" USING DUMP-TITLE, DUMP-OPTIONS, FC        00223903
*          CALL "CEE3ABD" USING ABDCODE , TIMING                     00224006
*          END-IF.                                                  00224103
*          *****                                00224402
*          ** SETUP TO CALL CEESSTQT WITH -99 AS INPUT. **        00224502
*          ** WE SHOULD EXPECT TO SEE AN ERROR HERE. **          00224602
*          *****                                00224702
*          MOVE -99 TO MY-INPUT.                                     00224802
*          *****                                00224902
*          ** NOW CALL CEESSTQT. INPUT: -99 **                    00225002
*          **                                     IT RETURNS: **    00225102
*          ** FEEDBACK CODE **                                     00225202
*          ** RESULT **                                          00225302
*          ** REPORT ERROR AND STOP IF CEESSTQT FAILS. **        00225402
*          *****                                00225502
*          CALL "CEESSTQT" USING MY-INPUT, FC, RESULT.             00225602
*          IF NOT CEE000 OF FC THEN                                  00225702
*          CALL "CEEMSG" USING FC, MSG-DEST, OMITTED                00225802
*          CALL "CEE3DMP" USING DUMP-TITLE, DUMP-OPTIONS, FC        00225902
*          CALL "CEE3ABD" USING ABDCODE , TIMING                     00226006

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      END-IF.                                00226102
*      *****                                00226202
*      ** DISPLAY THE OUTPUT.                ** 00226302
*      *****                                00226402
      MOVE RESULT TO MY-OUTPUT-STRING-RESULT. 00226503
      MOVE MY-INPUT TO MY-OUTPUT-STRING-INPUT. 00226603
*      *****                                00226703
*      ** NOW CALL CEEMOUT. INPUT: STRING TO WRITE ** 00226803
*      **                                     ** 00226903
*      **                                     DESTINATION **
*      **                                     IT RETURNS: ** 00227003
*      ** FEEDBACK CODE ** 00227103
*      ** REPORT ERROR AND STOP IF CEEMOUT FAILS. ** 00227203
*      *****                                00227303
      CALL "CEEMOUT" USING MY-OUTPUT-STRING, MSG-DEST, FC. 00227403
      IF NOT CEE000 OF FC THEN 00227503
*      *****                                00227603
*      ** USE CEEMSG TO DISPLAY LANG. ENV. MESSAGE ** 00227703
*      *****                                00227803
      CALL "CEEMSG" USING FC, MSG-DEST, OMITTED 00227903
*      *****                                00228003
*      ** CALL CEE3DMP TO PRODUCE CEEDUMP ** 00228103
*      *****                                00228203
      CALL "CEE3DMP" USING DUMP-TITLE, DUMP-OPTIONS, FC 00228303
      CALL "CEE3ABD" USING ABDCODE , TIMING 00228406
      END-IF.                                00228503
*      *****                                00228802
*      ** WE ARE OUTTA HERE! ** 00228902
*      *****                                00229002
      GOBACK.                                00240000

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COBOL EXAMPLE

- 7 -

COBOL Page 1 of 7