

DECUS NO.

FOCAL8-86

TITLE

KCF TEMPERATURE CONVERSION TABLE

AUTHOR

Thomas J. Ford

COMPANY

White Mountains Regional High School Whitefield, New Hampshire

DATE

November 13, 1969

SOURCE LANGUAGE

FOCAL

ATTENTION

This is a USER program. Other than requiring that it conform to submittal and review standards, no quality control has been imposed upon this program by DECUS.

The DECUS Program Library is a clearing house only; it does not generate or test programs. No warranty, express or implied, is made by the contributor, Digital Equipment Computer Users Society or Digital Equipment Corporation as to the accuracy or functioning of the program or related material, and no responsibility is assumed by these parties in connection therewith.

KCF TEMPERATURE CONVERSION TABLE

DECUS Program Library Write-up

DECUS No. FOCAL8-86

ABSTRACT:

This FOCAL program expands the usefulness of the sample program listed in

INTRODUCTION TO PROGRAMMING (DEC)

Temperature conversion and table print out is available from any starting temperature (6 digit limit), in any size increment, to any higher temperature.

One pass through the ASK command of line 01.07 leads by way of the following IF statements to the unique selection of one of the six formulas which cover all possible conversions between KELVIN, CELSIUS, or FAHRENHEIT temperature scales.

Each conversion scheme operates under a separate group number simply for convenience in studying the program listing, and each group contains its own QUIT command to keep the program from continuing to other unwanted tables.

The program may be used to generate tables of any range and subdivision for use in the field, or the range of immediate interest may be run as needed in the laboratory.

The IF statements responsible for unique selection (group 1 from line 01.10; group 2; group 3) may be expanded to include other conversions or be employed as the basis of other FOCAL programs requiring subroutine selection.

1						-

```
ବିଷ୍ଟ ବର୍ଷ ଓ ପ୍ରତ୍ତ ଓ ପ
C-FOCAL , 8/68
01.01 T "K,C,F TEMPERATURE CONVERSION TABLE"!!
01.02 T %6.01; C <<<< DEP. 0240 IN LOC. 1261 VICE 0275
                                                     AND [TO] SCALE AS 2"!
01.03 T "INDICATE [FROM] SCALE AS 1
01.05 T "ZERO THE SCALE NOT DESIRED"!
01.07 A "3- AVAILABLE SCALES, KELVIN", K, "CELSIUS", C, "FAHRENHEIT", 0,!
01.03 A "FROM ",START," TO ",END," DEGREES",!
01.69 A "IN INCREMENTS OF ", INCR," DEGREES",!!
01.10 I (1-K)2.11,2.11
01.11 I (1-C)3.13.3.13
01.14 GOTO 1.03
02.11 I (1-C)5.01,7.01
02.13 I (1-0)6.01,10.01; GOTO 1.03
33.13 I (1-0)8.01,9.01; GOTO 1.03
05.01 T "K TO C",!
05.03 F T=START, INCR, END; T !; DO 5.07
Ø5.05 Q
05.07 T " "T,T," K. DEG......T-273.16," C. DEG."
06.91 T "K TO F",!
06.03 F T=START, INCR, END; T !; DU 6.07
96.35 0
Яб.Я7 Т " ",Т," К. DEG.....",[(Т-273.16)*9/5]+32," F. DEG."
97.91 T "C TO K",!
07.03 F T=START, INCR, END; T !; DO 7.07
07.05 0
07.07 T " ",T," C.DEG.....,T+273.16," K. DEG."
08.01 T "C TO F",!
08.03 F T=START, INCR, END; T !; DO 8.07
08.05 0
08.07 T " ",T," C. DEG....(T*9/5)+32," F. DEG."
09.01 T "F TO C",!
09.03 F T=START, INCR, END; T !; DO 9.07
09.05 0
09.07 T " ",T," F. DEG......",(T-32)*5/9," C. DEG."
10.01 T "F TO K",!
10.03 F T=START, INCR, END; T !; DO 10.07
```

10.47 T " ",T," F. DEG......",[(T-32)*5/9]+273.16," K. DEG."