```
1         * PROCTEXT.S -- Process a line of text; Nov 27, 1981
2         *--------------
3         BEGIN PROCTEXT;
4           ENT PROCTEXT,PUTWRD,CENTER;
5           ENT CINS;
6           ENT PWRITE,QWRITE,WRITELN;
7           ENT PLEN;
8         *--------------
9           EXT INBUF,OUTBUF;
10          EXT TRUE,FALSE;
11          EXT CEVAL,RMVAL,TIVAL,ULVAL;
12          EXT OUTP,OUTW;
13          EXT JUSTVAL,NEXTRA,MLINEW;
14          EXT FILLVAL,GOTWRD,WRDLEN,WRDBUF;
15          EXT PSEUDO,OUTWRDS;
16          EXT PROC LEADBL,PROC UNDERL,PROC PUTOUT;
17          EXT PROC GETWRD,PROC SPREAD,PROC BRK;
18          EXT PROC IFORM,PROC CAT2,PROC WRITE;
19        *--------------
20          SET LINEL=132;          * Max length of output line
21          SET LINEW=3*LINEL;      * Max length with underlines
22          DCL KQ1,IQ1;
23          DCL IPOS;
24        *--------------
25        PROC PROCTEXT;
26    1     IF INBUF GT 0;
27    2       THEN
28    2         IF INBUF(1) EQ ' ';
29    3           THEN CALL LEADBL;
30    3           ENDIF
31    2       ENDIF
32    1     IF ULVAL GT 0;
33    2       THEN
34    2         CALL UNDERL;
35    2         ULVAL=ULVAL-1;
36    2       ENDIF
37    1     IF INBUF EQ 0;
38    2       THEN
39    2         IF NOT FILLVAL;
40    3           THEN
41    3             CALL PUTOUT;
42    3             OUTP=0;
43    3             OUTW=0;
44    3           ENDIF
45    2       ELSE
46    2         IF NOT FILLVAL;
47    3           THEN
48    3             KQ1=INBUF;
49    3             IQ1=0;
50    3             DO WHILE IQ1 LE KQ1;
51    4               OUTBUF(IQ1)=INBUF(IQ1);
52    4               IQ1=IQ1+1;
53    4               ENDDO
54    3             OUTP=KQ1+1;
55    3             IF CEVAL GT 0;
56    4               THEN CALL CENTER;
57    4               ENDIF
58    3             CALL PUTOUT;
59    3           ELSE
60    3             IF CEVAL GT 0;
```

```
61   4              THEN
62   4                KQ1=INBUF;
63   4                IQ1=0;                          * Copy length to Outbuf
64   4                DO WHILE IQ1 LE KQ1;
65   5                  OUTBUF(IQ1)=INBUF(IQ1);
66   5                  IQ1=IQ1+1;
67   5                  ENDDO
68   4                OUTP=KQ1+1;
69   4                OUTW=KQ1+1;
70   4                CALL CENTER;
71   4                CALL PUTOUT;
72   4              ELSE
73   4                IF INBUF GT 0;
74   5                  THEN
75   5                    IPOS=1;
76   5                    GOTWRD=TRUE;
77   5                    DO WHILE GOTWRD;
78   6                      CALL GETWRD(IPOS);
79   6                      IF GOTWRD;
80   7                        THEN CALL PUTWRD;
81   7                        ENDIF
82   6                      ENDDO
83   5                  ENDIF
84   4              ENDIF
85   3          ENDIF
86   2      ENDIF
87   1    IF CEVAL GT 0;
88   2      THEN CEVAL=CEVAL-1;
89   2      ENDIF
90   1    RETURN
91   1    ENDPROC
92   0  *--------------
93   0  * CINS: True if CHAR is in string S, else False
94   0    DCL I,L;
95   0  *--------------
96   0  PROC CINS(CHAR,S);
97   1    L=S;
98   1    I=1;
99   1    DO WHILE I LE L;
100  2      IF S(I) EQ CHAR;
101  3        THEN RETURN TRUE;
102  3        ENDIF
103  2      I=I+1;
104  2      ENDDO
105  1    RETURN FALSE;
106  1    ENDPROC
107  0  *--------------
108  0    DCL IW1,LW1,LAST,LLVAL,W;
109  0    DCL UNDLIN=95,BKSP=8;
110  0    DCL CH;
111  0    DCL TW1;
112  0    MSG PUNCTS='.!?';
113  0  *--------------
114  0  * PUTWRD:  Put word into output line.  If result is too long
115  0  * justify the line and output it, then put word into output.
116  0  *--------------
117  0  PROC PUTWRD;
118  1    W=0;
119  1    IW1=1;
120  1    DO WHILE IW1 LE WRDLEN;
```

```
121  2       IF WRDBUF(IW1) NE BKSP;
122  3         THEN
123  3           IF WRDBUF(IW1) NE UNDLIN;
124  4             THEN W=W+1;
125  4             ENDIF
126  3         ENDIF
127  2       IW1=IW1+1;
128  2       ENDDO
129  1     LAST=WRDLEN+OUTP+1;
130  1     LLVAL=RMVAL-TIVAL;
131  1     IF LLVAL GT RMVAL;
132  2       THEN LLVAL=RMVAL;
133  2       ENDIF
134  1     IF OUTP GT 0;
135  2       THEN
136  2         IF (OUTW+W) GT LLVAL;
137  3           THEN TW1=TRUE;
138  3           ELSE
139  3             IF LAST GT MLINEW;
140  4               THEN TW1=TRUE;
141  4               ELSE TW1=FALSE;
142  4               ENDIF
143  3           ENDIF
144  2         IF TW1;
145  3           THEN
146  3             LAST=LAST-OUTP;
147  3             IF JUSTVAL AND FILLVAL;
148  4               THEN
149  4                 IF OUTBUF(OUTP-1) EQ PSEUDO;
150  5                   THEN
151  5                     CH=OUTBUF(OUTP-2);
152  5                     IF CINS(CH,PUNCTS);
153  6                       THEN
154  6                         OUTW=OUTW-1;
155  6                         OUTP=OUTP-1;
156  6                       ENDIF
157  5                   ENDIF
158  4                 NEXTRA=LLVAL-OUTW+1;
159  4                 CALL SPREAD;
160  4                 IF NEXTRA GT 0;
161  5                   THEN
162  5                     IF OUTWRDS GT 1;
163  6                       THEN OUTP=OUTP+NEXTRA;
164  6                       ENDIF
165  5                   ENDIF
166  4               ENDIF
167  3             CALL BRK;
168  3           ENDIF
169  2       ENDIF
170  1     IW1=1;
171  1     LW1=WRDLEN;
172  1     DO WHILE IW1 LE LW1;
173  2       OUTBUF(OUTP+IW1)=WRDBUF(IW1);
174  2       IW1=IW1+1;
175  2       ENDDO
176  1     CH=OUTBUF(OUTP+LW1);
177  1     IF CINS(CH,PUNCTS);
178  2       THEN
179  2         LAST=LAST+1;
180  2         W=W+1;
```

```
181  2        OUTBUF(OUTP+LW1+1)=PSEUDO;
182  2      ENDIF
183  1    OUTP=LAST;
184  1    OUTBUF(OUTP)=' ';
185  1    OUTW=OUTW+W+1;
186  1    OUTWRDS=OUTWRDS+1;
187  1    RETURN
188  1    ENDPROC
189  0  *---------------
190  0    DCL IP1,KP1;
191  0  *---------------
192  0  PROC CENTER;              * Compute amount of indentation for center
193  1    OUTW=1;
194  1    IP1=1;
195  1    KP1=OUTP;
196  1    DO WHILE IP1 LE KP1;
197  2      IF OUTBUF(IP1) NE BKSP;
198  3        THEN
199  3          IF OUTBUF(IP1) NE UNDLIN;
200  4            THEN OUTW=OUTW+1;
201  4            ENDIF
202  3        ENDIF
203  2      IP1=IP1+1;
204  2      ENDDO
205  1    TIVAL=(RMVAL+TIVAL-OUTW)/2;
206  1    IF TIVAL LT 0;
207  2      THEN TIVAL=0;
208  2      ENDIF
209  1    RETURN
210  1    ENDPROC
211  0  *---------------
212  0    DCL NBUF(3);            * Small Number conversion buffer
213  0    DCL PLEN=0,PBUF(LINEW);
214  0  *---------------
215  0  PROC PWRITE(U1,C);
216  1    PLEN=PLEN+1;
217  1    PBUF(PLEN)=C;
218  1    RETURN
219  1    ENDPROC
220  0  *---------------
221  0  PROC QWRITE(U2,NUM);      * Write a 3 digit or smaller number
222  1    IF NUM LT 10;
223  2      THEN NBUF=1;
224  2      ELSE IF NUM LT 100;
225  3             THEN NBUF=2;
226  3             ELSE NBUF=3;
227  3             ENDIF
228  2      ENDIF
229  1    CALL IFORM(NUM,NBUF);
230  1    PBUF=PLEN;
231  1    CALL CAT2(PBUF,NBUF);
232  1    PLEN=PBUF;
233  1    RETURN
234  1    ENDPROC
235  0  *---------------
236  0  PROC WRITELN(UNIT);
237  1    PBUF=PLEN;
238  1    CALL WRITE(UNIT,PBUF);
239  1    PBUF=0;
240  1    PLEN=0;
```

```
241   1      RETURN
242   1      ENDPROC
243   0    *---------------
244   0    END
 NO ERRORS DETECTED
```