Pascal: Speeding up Pascal text file reading (3 of 3)

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Revised:        11/30/84
Security:       Everyone
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PROCEDURE FILLBUFFER;
 BEGIN
    EMPTY := BLOCKREAD (INFILE,BUFFER,2) = 0;
    IF NOT EMPTY THEN BEGIN
       NOTNULLS := BUFSIZE + SCAN (- BUFSIZE, <> CHR(0),
                   BUFFER [1023]);
       BUFINDEX := 0;
    END;
 END;

 PROCEDURE OPENFILE (FNAME:  STRING);
 BEGIN
    IF ((POS('.text',FNAME) = 0) AND
                          (POS('.TEXT',FNAME) = 0)) THEN
                          FNAME := CONCAT (FNAME,'.TEXT');
    RESET (INFILE, FNAME);
    FILLBUFFER; FILLBUFFER;
 END;

 PROCEDURE READFILE (VAR LINE:  STRING);
 VAR INDENT,
     LINELEN:  INTEGER;
 BEGIN
    IF BUFINDEX >= NOTNULLS THEN FILLBUFFER;
    IF NOT EMPTY THEN BEGIN
       LINELEN := SCAN (BUFSIZE, = CHR(13), BUFFER [BUFINDEX]);
       IF BUFFER [BUFINDEX] = CHR (16) THEN BEGIN
          INDENT := ORD (BUFFER [BUFINDEX + 1]) - 32;
          (*$R-*)
          LINE [0] := CHR (LINELEN + INDENT - 2);
          (*$R+*)
          IF INDENT > 0 THEN FILLCHAR (LINE [1], INDENT, ' ');
          IF LINELEN > 2 THEN MOVELEFT (BUFFER [BUFINDEX + 2],
                            LINE [1 + INDENT], LINELEN - 2);
       END ELSE BEGIN
          (*$R-*)
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                 LINE [0] := CHR (LINELEN);
                 (*$R+*)


                 IF LINELEN > 0 THEN MOVELEFT (BUFFER [BUFINDEX],
                                     LINE [1], LINELEN);
            END;
         BUFINDEX := BUFINDEX + LINELEN + 1;
      END;
END;


PROCEDURE GETOPTION;
BEGIN
   REPEAT
      WRITELN;
      WRITE ('OPTIONS:  Q)uickread, R)eadln, E)xit ');
      CH := ' ';
      READ (KEYBOARD, CH);
   UNTIL CH IN ['Q', 'q', 'R', 'r', 'E', 'e'];
   IF CH IN ['E', 'e'] THEN BEGIN
      PAGE (OUTPUT);
      RESET (INFILE, FILENAME);
      CLOSE (INFILE, PURGE);
      EXIT (PROGRAM);
   END;
END;


PROCEDURE PRINTFILE;
BEGIN
   PAGE (OUTPUT); WRITELN;
   CASE CH OF
      'Q', 'q':  BEGIN
                    OPENFILE (FILENAME);
                    REPEAT
                         LINE := '';
                         READFILE (LINE);
                         WRITELN (LINE);
                      UNTIL EMPTY;
                      CLOSE (INFILE);
                  END;
      'R', 'r':  BEGIN
                     RESET (TEXTFILE, FILENAME);
                     REPEAT
                        READLN (TEXTFILE, LINE);
                        WRITELN (LINE);
                     UNTIL EOF (TEXTFILE);
                     CLOSE (TEXTFILE);
                  END;
   END; (* CASE *)
END;


PROCEDURE INIT;
VAR TEMP:  STRING;
BEGIN
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    PAGE (OUTPUT); WRITELN;
    WRITE ('One momemt, please...');
    REWRITE (TEXTFILE, FILENAME);
    WRITE (TEXTFILE, 'This is a test file written to ');
    WRITE (TEXTFILE, 'demonstrate the ');
    WRITE ('.');
    WRITELN (TEXTFILE, '"QUICKREAD" program.');
    WRITE ('.');
    WRITELN (TEXTFILE);
    TEMP := 'I''m melting.';
    REPEAT
       WRITE (TEXTFILE, 'TEST STRING --> ');
       WRITELN (TEXTFILE, TEMP);
       DELETE (TEMP, LENGTH (TEMP), 1);
       WRITE ('.');
    UNTIL TEMP = '';
    WRITELN (TEXTFILE, ' AHHHHHhhhhhh....');
    WRITELN (TEXTFILE);
    WRITE (TEXTFILE, 'Notice that using READLN takes much ');
    WRITE (TEXTFILE, 'more time');
    WRITELN (TEXTFILE, ' to read a long line');
    WRITE ('.');
    WRITELN (TEXTFILE, 'than it takes to read a short one.');
    WRITE ('.');
    CLOSE (TEXTFILE, LOCK);
    WRITELN;
  END;

  BEGIN
    INIT; (* Write a temporary file for *)
    HELL_FREEZES_OVER := FALSE;
    REPEAT
    GETOPTIONS; (* Get users choice *)
       PRINTFILE; (* Print the file *)
    UNTIL HELL_FREEZES_OVER; (* Forever.  *)
  END.
```

Apple Tech Notes

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