CSE220 LS 12166 Lab2 Team18
Nicholas Murray
Vivian Vinh
Timothy Zamora

Test Case

Function to be test	Procedure name	Input parameter	Output or Return value	Expected result	Test command line
Extract the content of an input file and produce an identical output with line numbers	int main (int argc, const char *argv[])	NEWTON.PAS	output.txt	Expected output is identical to input with each line numbered.	$ ./lister.exe NEWTON.PAS > output.txt

Input data:

```
PROGRAM newton (input, output);

CONST
  epsilon = 1e-6;

VAR
  number, root, sqroot : real;

BEGIN
  REPEAT
        writeln;
        write('Enter new number (0 to quit): ');
        read(number);

        IF number = 0 THEN BEGIN
          writeln(number:12:6, 0.0:12:6);
        END
        ELSE IF number < 0 THEN BEGIN
          writeln('*** ERROR:  number < 0');
        END
        ELSE BEGIN
          sqroot := sqrt(number);
          writeln(number:12:6, sqroot:12:6);
          writeln;

          root := 1;
          REPEAT
                root := (number/root + root)/2;
                writeln(root:24:6,
                        100*abs(root - sqroot)/sqroot:12:2,
                        '%')
          UNTIL abs(number/sqr(root) - 1) < epsilon;
        END
  UNTIL number = 0
END.
```

Output data:

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```
1 : PROGRAM newton (input, output);
2 :
3 : CONST
4 :     epsilon = 1e-6;
5 :
6 : VAR
7 :     number, root, sqroot : real;
8 :
9 : BEGIN
10 :    REPEAT
11 :        writeln;
12 :        write('Enter new number (0 to quit): ');
13 :        read(number);
14 :
15 :        IF number = 0 THEN BEGIN
16 :            writeln(number:12:6, 0.0:12:6);
17 :        END
18 :        ELSE IF number < 0 THEN BEGIN
19 :            writeln('*** ERROR:  number < 0');
20 :        END
21 :        ELSE BEGIN
22 :            sqroot := sqrt(number);
23 :            writeln(number:12:6, sqroot:12:6);
24 :            writeln;
25 :
26 :            root := 1;
27 :            REPEAT
28 :                    root := (number/root + root)/2;
29 :                    writeln(root:24:6,
30 :                                100*abs(root - sqroot)/sqroot:12:2,
31 :                                '%')
32 :            UNTIL abs(number/sqr(root) - 1) < epsilon;
33 :        END
34 :    UNTIL number = 0
35 : END.
```