Project 2 test files

No Syntax Errors:

program test (input, output);

var a : integer;

var b : real;

var c : array [1..2] of integer;

function fun2(x: integer; y: integer) : real;

var e : real;

function fun3(n: integer; z: real) : integer;

var e: integer;

begin

a:= e;

e:= c[e];

fun3 := 3

end;

function fun4(n: integer; z: real) : integer;

var e: integer;

begin

a:= e;

e:= c[e];

fun3 := 3

end;

begin

a:= fun1(x, e, c, b);

x:= fun3(c[1], e);

e := e + 4.44;

a:= (a mod y) div x;

while ((a >= 4) and ((b <= e)

or (not (a = c[a])))) do

begin

a:= c[a] + 1

end;

fun2 := 2.5

end;

begin

b:= fun2(c[4], c[5]);

b:= fun2(c[4],2);

if (a < 2) then a:= 1 else a := a + 2;

if (b > 4.2) then a := c[a]

end.

Listing:

1 program test (input, output);

2 var a : integer;

3 var b : real;

4 var c : array [1..2] of integer;

5

6 function fun2(x: integer; y: integer) : real;

7 var e : real;

8

9 function fun3(n: integer; z: real) : integer;

10 var e: integer;

11 begin

12 a:= e;

13 e:= c[e];

14 fun3 := 3

15 end;

16

17 function fun4(n: integer; z: real) : integer;

18 var e: integer;

19 begin

20 a:= e;

21 e:= c[e];

22 fun3 := 3

23 end;

24

25 begin

26 a:= fun1(x, e, c, b);

27 x:= fun3(c[1], e);

28 e := e + 4.44;

29 a:= (a mod y) div x;

30 while ((a >= 4) and ((b <= e)

31 or (not (a = c[a])))) do

32 begin

33 a:= c[a] + 1

34 end;

35 fun2 := 2.5

36 end;

37

38 begin

39 b:= fun2(c[4], c[5]);

40 b:= fun2(c[4],2);

41 if (a < 2) then a:= 1 else a := a + 2;

42 if (b > 4.2) then a := c[a]

43 end.

Token:

Line No. Lexeme TOKEN-TYPE ATTRIBUTE

1 program 50 (resword) -1480583088 (NULL)

1 test 52 (ID) 0x0 (ptr2symb tbl)

1 ( 75 (SYMBOL) 0 (Symbol)

1 input 52 (ID) 0x0 (ptr2symb tbl)

1 , 78 (SYMBOL) 0 (Symbol)

1 output 52 (ID) 0x0 (ptr2symb tbl)

1 ) 75 (SYMBOL) 1 (Symbol)

1 ; 79 (SYMBOL) 0 (Symbol)

2 var 51 (resword) -1480583024 (NULL)

2 a 52 (ID) 0x0 (ptr2symb tbl)

2 : 80 (SYMBOL) 0 (Symbol)

2 integer 55 (resword) -1480582832 (NULL)

2 ; 79 (SYMBOL) 0 (Symbol)

3 var 51 (resword) -1480583024 (NULL)

3 b 52 (ID) 0x0 (ptr2symb tbl)

3 : 80 (SYMBOL) 0 (Symbol)

3 real 56 (resword) -1480582768 (NULL)

3 ; 79 (SYMBOL) 0 (Symbol)

4 var 51 (resword) -1480583024 (NULL)

4 c 52 (ID) 0x0 (ptr2symb tbl)

4 : 80 (SYMBOL) 0 (Symbol)

4 array 53 (resword) -1480582960 (NULL)

4 [ 76 (SYMBOL) 0 (Symbol)

4 1 57 (INTEGER) 0 (INTEGER)

4 .. 73 (SYMBOL) -329055568 (Symbol)

4 2 57 (INTEGER) 0 (INTEGER)

4 ] 76 (SYMBOL) 1 (Symbol)

4 of 54 (resword) -1480582896 (NULL)

4 integer 55 (resword) -1480582832 (NULL)

4 ; 79 (SYMBOL) 0 (Symbol)

6 function���� 58 (resword) -1480582704 (NULL)

6 fun2 52 (ID) 0x0 (ptr2symb tbl)

6 ( 75 (SYMBOL) 0 (Symbol)

6 x 52 (ID) 0x0 (ptr2symb tbl)

6 : 80 (SYMBOL) 0 (Symbol)

6 integer 55 (resword) -1480582832 (NULL)

6 ; 79 (SYMBOL) 0 (Symbol)

6 y 52 (ID) 0x0 (ptr2symb tbl)

6 : 80 (SYMBOL) 0 (Symbol)

6 integer 55 (resword) -1480582832 (NULL)

6 ) 75 (SYMBOL) 1 (Symbol)

6 : 80 (SYMBOL) 0 (Symbol)

6 real 56 (resword) -1480582768 (NULL)

6 ; 79 (SYMBOL) 0 (Symbol)

7 var 51 (resword) -1480583024 (NULL)

7 e 52 (ID) 0x0 (ptr2symb tbl)

7 : 80 (SYMBOL) 0 (Symbol)

7 real 56 (resword) -1480582768 (NULL)

7 ; 79 (SYMBOL) 0 (Symbol)

9 function 58 (resword) -1480582704 (NULL)

9 fun3 52 (ID) 0x0 (ptr2symb tbl)

9 ( 75 (SYMBOL) 0 (Symbol)

9 n 52 (ID) 0x0 (ptr2symb tbl)

9 : 80 (SYMBOL) 0 (Symbol)

9 integer 55 (resword) -1480582832 (NULL)

9 ; 79 (SYMBOL) 0 (Symbol)

9 z 52 (ID) 0x0 (ptr2symb tbl)

9 : 80 (SYMBOL) 0 (Symbol)

9 real 56 (resword) -1480582768 (NULL)

9 ) 75 (SYMBOL) 1 (Symbol)

9 : 80 (SYMBOL) 0 (Symbol)

9 integer 55 (resword) -1480582832 (NULL)

9 ; 79 (SYMBOL) 0 (Symbol)

10 var 51 (resword) -1480583024 (NULL)

10 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

10 : 80 (SYMBOL) 0 (Symbol)

10 integer 55 (resword) -1480582832 (NULL)

10 ; 79 (SYMBOL) 0 (Symbol)

11 begin 60 (resword) -1480582640 (NULL)

12 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

12 := 62 (ASSIGNOP) 0 (ASSIGNOP)

12 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

12 ; 79 (SYMBOL) 0 (Symbol)

13 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

13 := 62 (ASSIGNOP) 0 (ASSIGNOP)

13 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

13 [ 76 (SYMBOL) 0 (Symbol)

13 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

13 ] 76 (SYMBOL) 1 (Symbol)

13 ; 79 (SYMBOL) 0 (Symbol)

14 fun3 52 (ID) 0x7ffba7c01f90 (ptr2symb tbl)

14 := 62 (ASSIGNOP) 0 (ASSIGNOP)

14 3 57 (INTEGER) 0 (INTEGER)

15 end 61 (resword) -1480582576 (NULL)

15 ; 79 (SYMBOL) 0 (Symbol)

17 function 58 (resword) -1480582704 (NULL)

17 fun4 52 (ID) 0x0 (ptr2symb tbl)

17 ( 75 (SYMBOL) 0 (Symbol)

17 n 52 (ID) 0x7ffba7c01fd0 (ptr2symb tbl)

17 : 80 (SYMBOL) 0 (Symbol)

17 integer 55 (resword) -1480582832 (NULL)

17 ; 79 (SYMBOL) 0 (Symbol)

17 z 52 (ID) 0x7ffba7c02010 (ptr2symb tbl)

17 : 80 (SYMBOL) 0 (Symbol)

17 real 56 (resword) -1480582768 (NULL)

17 ) 75 (SYMBOL) 1 (Symbol)

17 : 80 (SYMBOL) 0 (Symbol)

17 integer 55 (resword) -1480582832 (NULL)

17 ; 79 (SYMBOL) 0 (Symbol)

18 var 51 (resword) -1480583024 (NULL)

18 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

18 : 80 (SYMBOL) 0 (Symbol)

18 integer 55 (resword) -1480582832 (NULL)

18 ; 79 (SYMBOL) 0 (Symbol)

19 begin 60 (resword) -1480582640 (NULL)

20 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

20 := 62 (ASSIGNOP) 0 (ASSIGNOP)

20 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

20 ; 79 (SYMBOL) 0 (Symbol)

21 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

21 := 62 (ASSIGNOP) 0 (ASSIGNOP)

21 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

21 [ 76 (SYMBOL) 0 (Symbol)

21 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

21 ] 76 (SYMBOL) 1 (Symbol)

21 ; 79 (SYMBOL) 0 (Symbol)

22 fun3 52 (ID) 0x7ffba7c01f90 (ptr2symb tbl)

22 := 62 (ASSIGNOP) 0 (ASSIGNOP)

22 3 57 (INTEGER) 0 (INTEGER)

23 end 61 (resword) -1480582576 (NULL)

23 ; 79 (SYMBOL) 0 (Symbol)

25 begin 60 (resword) -1480582640 (NULL)

26 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

26 := 62 (ASSIGNOP) 0 (ASSIGNOP)

26 fun1 52 (ID) 0x0 (ptr2symb tbl)

26 ( 75 (SYMBOL) 0 (Symbol)

26 x 52 (ID) 0x7ffba7c01ed0 (ptr2symb tbl)

26 , 78 (SYMBOL) 0 (Symbol)

26 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

26 , 78 (SYMBOL) 0 (Symbol)

26 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

26 , 78 (SYMBOL) 0 (Symbol)

26 b 52 (ID) 0x7ffba7c01e10 (ptr2symb tbl)

26 ) 75 (SYMBOL) 1 (Symbol)

26 ; 79 (SYMBOL) 0 (Symbol)

27 x 52 (ID) 0x7ffba7c01ed0 (ptr2symb tbl)

27 := 62 (ASSIGNOP) 0 (ASSIGNOP)

27 fun3 52 (ID) 0x7ffba7c01f90 (ptr2symb tbl)

27 ( 75 (SYMBOL) 0 (Symbol)

27 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

27 [ 76 (SYMBOL) 0 (Symbol)

27 1 57 (INTEGER) 0 (INTEGER)

27 ] 76 (SYMBOL) 1 (Symbol)

27 , 78 (SYMBOL) 0 (Symbol)

27 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

27 ) 75 (SYMBOL) 1 (Symbol)

27 ; 79 (SYMBOL) 0 (Symbol)

28 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

28 := 62 (ASSIGNOP) 0 (ASSIGNOP)

28 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

28 + 64 (SYMBOL) 0 (Symbol)

28 4.44 57 (REAL) 0 (REAL)

28 ; 79 (SYMBOL) 0 (Symbol)

29 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

29 := 62 (ASSIGNOP) 0 (ASSIGNOP)

29 ( 75 (SYMBOL) 0 (Symbol)

29 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

29 mod 65 (resword) -1480582384 (NULL)

29 y 52 (ID) 0x7ffba7c01f10 (ptr2symb tbl)

29 ) 75 (SYMBOL) 1 (Symbol)

29 div 65 (resword) -1480582448 (NULL)

29 x 52 (ID) 0x7ffba7c01ed0 (ptr2symb tbl)

29 ; 79 (SYMBOL) 0 (Symbol)

30 while 70 (resword) -1480582064 (NULL)

30 ( 75 (SYMBOL) 0 (Symbol)

30 ( 75 (SYMBOL) 0 (Symbol)

30 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

30 4 57 (INTEGER) 0 (INTEGER)

30 ) 75 (SYMBOL) 1 (Symbol)

30 and 65 (resword) -1480582320 (NULL)

30 ( 75 (SYMBOL) 0 (Symbol)

30 ( 75 (SYMBOL) 0 (Symbol)

30 b 52 (ID) 0x7ffba7c01e10 (ptr2symb tbl)

30 <= 63 (RELOP) 3 (RELOP\_LE)

30 e 52 (ID) 0x7ffba7c01f50 (ptr2symb tbl)

30 ) 75 (SYMBOL) 1 (Symbol)

31 or 64 (resword) -1480582512 (NULL)

31 ( 75 (SYMBOL) 0 (Symbol)

31 not 72 (resword) 0 (NULL)

31 ( 75 (SYMBOL) 0 (Symbol)

31 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

31 = 63 (RELOP) 0 (RELOP\_EQ)

31 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

31 [ 76 (SYMBOL) 0 (Symbol)

31 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

31 ] 76 (SYMBOL) 1 (Symbol)

31 ) 75 (SYMBOL) 1 (Symbol)

31 ) 75 (SYMBOL) 1 (Symbol)

31 ) 75 (SYMBOL) 1 (Symbol)

31 ) 75 (SYMBOL) 1 (Symbol)

31 do 71 (resword) -1480582000 (NULL)

32 begin 60 (resword) -1480582640 (NULL)

33 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

33 := 62 (ASSIGNOP) 0 (ASSIGNOP)

33 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

33 [ 76 (SYMBOL) 0 (Symbol)

33 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

33 ] 76 (SYMBOL) 1 (Symbol)

33 + 64 (SYMBOL) 0 (Symbol)

33 1 57 (INTEGER) 0 (INTEGER)

34 end 61 (resword) -1480582576 (NULL)

34 ; 79 (SYMBOL) 0 (Symbol)

35 fun2 52 (ID) 0x7ffba7c01e90 (ptr2symb tbl)

35 := 62 (ASSIGNOP) 0 (ASSIGNOP)

35 2.5 57 (REAL) 0 (REAL)

36 end 61 (resword) -1480582576 (NULL)

36 ; 79 (SYMBOL) 0 (Symbol)

38 begin 60 (resword) -1480582640 (NULL)

39 b 52 (ID) 0x7ffba7c01e10 (ptr2symb tbl)

39 := 62 (ASSIGNOP) 0 (ASSIGNOP)

39 fun2 52 (ID) 0x7ffba7c01e90 (ptr2symb tbl)

39 ( 75 (SYMBOL) 0 (Symbol)

39 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

39 [ 76 (SYMBOL) 0 (Symbol)

39 4 57 (INTEGER) 0 (INTEGER)

39 ] 76 (SYMBOL) 1 (Symbol)

39 , 78 (SYMBOL) 0 (Symbol)

39 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

39 [ 76 (SYMBOL) 0 (Symbol)

39 5 57 (INTEGER) 0 (INTEGER)

39 ] 76 (SYMBOL) 1 (Symbol)

39 ) 75 (SYMBOL) 1 (Symbol)

39 ; 79 (SYMBOL) 0 (Symbol)

40 b 52 (ID) 0x7ffba7c01e10 (ptr2symb tbl)

40 := 62 (ASSIGNOP) 0 (ASSIGNOP)

40 fun2 52 (ID) 0x7ffba7c01e90 (ptr2symb tbl)

40 ( 75 (SYMBOL) 0 (Symbol)

40 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

40 [ 76 (SYMBOL) 0 (Symbol)

40 4 57 (INTEGER) 0 (INTEGER)

40 ] 76 (SYMBOL) 1 (Symbol)

40 , 78 (SYMBOL) 0 (Symbol)

40 2 57 (INTEGER) 0 (INTEGER)

40 ) 75 (SYMBOL) 1 (Symbol)

40 ; 79 (SYMBOL) 0 (Symbol)

41 if 67 (resword) -1480582256 (NULL)

41 ( 75 (SYMBOL) 0 (Symbol)

41 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

41 < 63 (RELOP) 1 (RELOP\_LT)

41 2 57 (INTEGER) 0 (INTEGER)

41 ) 75 (SYMBOL) 1 (Symbol)

41 then 68 (resword) -1480582192 (NULL)

41 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

41 := 62 (ASSIGNOP) 0 (ASSIGNOP)

41 1 57 (INTEGER) 0 (INTEGER)

41 else 69 (resword) -1480582128 (NULL)

41 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

41 := 62 (ASSIGNOP) 0 (ASSIGNOP)

41 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

41 + 64 (SYMBOL) 0 (Symbol)

41 2 57 (INTEGER) 0 (INTEGER)

41 ; 79 (SYMBOL) 0 (Symbol)

42 if 67 (resword) -1480582256 (NULL)

42 ( 75 (SYMBOL) 0 (Symbol)

42 b 52 (ID) 0x7ffba7c01e10 (ptr2symb tbl)

42 > 63 (RELOP) 2 (RELOP\_GT)

42 4.2 57 (REAL) 0 (REAL)

42 ) 75 (SYMBOL) 1 (Symbol)

42 then 68 (resword) -1480582192 (NULL)

42 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

42 := 62 (ASSIGNOP) 0 (ASSIGNOP)

42 c 52 (ID) 0x7ffba7c01e50 (ptr2symb tbl)

42 [ 76 (SYMBOL) 0 (Symbol)

42 a 52 (ID) 0x7ffba7c01dd0 (ptr2symb tbl)

42 ] 76 (SYMBOL) 1 (Symbol)

43 end 61 (resword) -1480582576 (NULL)

43 . 74 (SYMBOL) -329055296 (Symbol)

EOF -1 (EOF) 0 (NULL)

**With syntax errors**

program test (input, output);

var a : integer;

var b : real;

var c array [1..2] of integer; <- missing colon

function fun2(x: integer; y: integer) : real;

var e : real;

<- missing begin reserved word

a:= fun1(x, e, c, b);

x:= fun3(c[1], e);

e := e + 4.44;

a:= (a mod y) div x;

while ((a >= 4) and ((b <= e)

or (not (a = c[a])))) do

begin

a:= c[a] + 1

end;

fun2 := 2.5

end;

begin

b:= fun2(c[4] f[5]); <- missing comma

b:= fun2(c[4], 2) <- missing semicolon

if (a < 2) then a:= 1 else a := a + 2;

if (b > 4.2) then a := c[a]

end.

Listing File

1 program test (input, output);

2 var a : integer;

3 var b : real;

4 var c array [1..2] of integer;

tok mismatch, expecting token code 80 instead recieved token array

tok mismatch expecting integer, real, array, instead recieved [

5

6 function fun2(x: integer; y: integer) : real;

7 var e : real;

8 a:= fun1(x, e, c, b);

tok mismatch expecting var function begin instead recieved a

9 x:= fun3(c[1], e);

10 e := e + 4.44;

11 a:= (a mod y) div x;

12 while ((a >= 4) and ((b <= e)

13 or (not (a = c[a])))) do

14 begin

15 a:= c[a] + 1

16 end;

17 fun2 := 2.5

tok mismatch expecting function, begin, instead recieved fun2

18 end;

19

20 begin

21 b:= fun2(c[4] f[5]);

tok mismatch expecting \* / div mod and,+ - or,< > <= >= <> ==,;,end,else,then,do,,,],), instead recieved f

tok mismatch expecting ,, ), instead recieved ]

22 b:= fun2(c[4], 2)

23 if (a < 2) then a:= 1 else a := a + 2;

tok mismatch expecting \* / div mod and,+ - or,< > <= >= <> ==,;,end,else,then,do,,,],), instead recieved if

tok mismatch expecting ;,end, instead recieved )

24 if (b > 4.2) then a := c[a]

25 end.

Token File

Line No. Lexeme TOKEN-TYPE ATTRIBUTE

1 program 50 (resword) -1883236224 (NULL)

1 test 52 (ID) 0x0 (ptr2symb tbl)

1 ( 75 (SYMBOL) 0 (Symbol)

1 input 52 (ID) 0x0 (ptr2symb tbl)

1 , 78 (SYMBOL) 0 (Symbol)

1 output 52 (ID) 0x0 (ptr2symb tbl)

1 ) 75 (SYMBOL) 1 (Symbol)

1 ; 79 (SYMBOL) 0 (Symbol)

2 var 51 (resword) -1883236144 (NULL)

2 a 52 (ID) 0x0 (ptr2symb tbl)

2 : 80 (SYMBOL) 0 (Symbol)

2 integer 55 (resword) -1883235904 (NULL)

2 ; 79 (SYMBOL) 0 (Symbol)

3 var 51 (resword) -1883236144 (NULL)

3 b 52 (ID) 0x0 (ptr2symb tbl)

3 : 80 (SYMBOL) 0 (Symbol)

3 real 56 (resword) -1883235824 (NULL)

3 ; 79 (SYMBOL) 0 (Symbol)

4 var 51 (resword) -1883236144 (NULL)

4 c 52 (ID) 0x0 (ptr2symb tbl)

4 array 53 (resword) -1883236064 (NULL)

4 [ 76 (SYMBOL) 0 (Symbol)

4 1 57 (INTEGER) 0 (INTEGER)

4 .. 73 (SYMBOL) -539864336 (Symbol)

4 2 57 (INTEGER) 0 (INTEGER)

4 ] 76 (SYMBOL) 1 (Symbol)

4 of 54 (resword) -1883235984 (NULL)

4 integer 55 (resword) -1883235904 (NULL)

4 ; 79 (SYMBOL) 0 (Symbol)

6 function 58 (resword) -1883235744 (NULL)

6 fun2 52 (ID) 0x0 (ptr2symb tbl)

6 ( 75 (SYMBOL) 0 (Symbol)

6 x 52 (ID) 0x0 (ptr2symb tbl)

6 : 80 (SYMBOL) 0 (Symbol)

6 integer 55 (resword) -1883235904 (NULL)

6 ; 79 (SYMBOL) 0 (Symbol)

6 y 52 (ID) 0x0 (ptr2symb tbl)

6 : 80 (SYMBOL) 0 (Symbol)

6 integer 55 (resword) -1883235904 (NULL)

6 ) 75 (SYMBOL) 1 (Symbol)

6 : 80 (SYMBOL) 0 (Symbol)

6 real 56 (resword) -1883235824 (NULL)

6 ; 79 (SYMBOL) 0 (Symbol)

7 var 51 (resword) -1883236144 (NULL)

7 e 52 (ID) 0x0 (ptr2symb tbl)

7 : 80 (SYMBOL) 0 (Symbol)

7 real 56 (resword) -1883235824 (NULL)

7 ; 79 (SYMBOL) 0 (Symbol)

8 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

8 := 62 (ASSIGNOP) 0 (ASSIGNOP)

8 fun1 52 (ID) 0x0 (ptr2symb tbl)

8 ( 75 (SYMBOL) 0 (Symbol)

8 x 52 (ID) 0x7ff28fd00020 (ptr2symb tbl)

8 , 78 (SYMBOL) 0 (Symbol)

8 e 52 (ID) 0x7ff28fd000c0 (ptr2symb tbl)

8 , 78 (SYMBOL) 0 (Symbol)

8 c 52 (ID) 0x7ff28fc02000 (ptr2symb tbl)

8 , 78 (SYMBOL) 0 (Symbol)

8 b 52 (ID) 0x7ff28fc01fb0 (ptr2symb tbl)

8 ) 75 (SYMBOL) 1 (Symbol)

8 ; 79 (SYMBOL) 0 (Symbol)

9 x 52 (ID) 0x7ff28fd00020 (ptr2symb tbl)

9 := 62 (ASSIGNOP) 0 (ASSIGNOP)

9 fun3 52 (ID) 0x0 (ptr2symb tbl)

9 ( 75 (SYMBOL) 0 (Symbol)

9 c 52 (ID) 0x7ff28fc02000 (ptr2symb tbl)

9 [ 76 (SYMBOL) 0 (Symbol)

9 1 57 (INTEGER) 0 (INTEGER)

9 ] 76 (SYMBOL) 1 (Symbol)

9 , 78 (SYMBOL) 0 (Symbol)

9 e 52 (ID) 0x7ff28fd000c0 (ptr2symb tbl)

9 ) 75 (SYMBOL) 1 (Symbol)

9 ; 79 (SYMBOL) 0 (Symbol)

10 e 52 (ID) 0x7ff28fd000c0 (ptr2symb tbl)

10 := 62 (ASSIGNOP) 0 (ASSIGNOP)

10 e 52 (ID) 0x7ff28fd000c0 (ptr2symb tbl)

10 + 64 (SYMBOL) 0 (Symbol)

10 4.44 57 (REAL) 0 (REAL)

10 ; 79 (SYMBOL) 0 (Symbol)

11 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

11 := 62 (ASSIGNOP) 0 (ASSIGNOP)

11 ( 75 (SYMBOL) 0 (Symbol)

11 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

11 mod 65 (resword) -1883235344 (NULL)

11 y 52 (ID) 0x7ff28fd00070 (ptr2symb tbl)

11 ) 75 (SYMBOL) 1 (Symbol)

11 div 65 (resword) -1883235424 (NULL)

11 x 52 (ID) 0x7ff28fd00020 (ptr2symb tbl)

11 ; 79 (SYMBOL) 0 (Symbol)

12 while 70 (resword) -1883234944 (NULL)

12 ( 75 (SYMBOL) 0 (Symbol)

12 ( 75 (SYMBOL) 0 (Symbol)

12 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

12 4 57 (INTEGER) 0 (INTEGER)

12 ) 75 (SYMBOL) 1 (Symbol)

12 and 65 (resword) -1883235264 (NULL)

12 ( 75 (SYMBOL) 0 (Symbol)

12 ( 75 (SYMBOL) 0 (Symbol)

12 b 52 (ID) 0x7ff28fc01fb0 (ptr2symb tbl)

12 <= 63 (RELOP) 3 (RELOP\_LE)

12 e 52 (ID) 0x7ff28fd000c0 (ptr2symb tbl)

12 ) 75 (SYMBOL) 1 (Symbol)

13 or 64 (resword) -1883235504 (NULL)

13 ( 75 (SYMBOL) 0 (Symbol)

13 not 72 (resword) 0 (NULL)

13 ( 75 (SYMBOL) 0 (Symbol)

13 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

13 = 63 (RELOP) 0 (RELOP\_EQ)

13 c 52 (ID) 0x7ff28fc02000 (ptr2symb tbl)

13 [ 76 (SYMBOL) 0 (Symbol)

13 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

13 ] 76 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 do 71 (resword) -1883234864 (NULL)

14 begin 60 (resword) -1883235664 (NULL)

15 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

15 := 62 (ASSIGNOP) 0 (ASSIGNOP)

15 c 52 (ID) 0x7ff28fc02000 (ptr2symb tbl)

15 [ 76 (SYMBOL) 0 (Symbol)

15 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

15 ] 76 (SYMBOL) 1 (Symbol)

15 + 64 (SYMBOL) 0 (Symbol)

15 1 57 (INTEGER) 0 (INTEGER)

16 end 61 (resword) -1883235584 (NULL)

16 ; 79 (SYMBOL) 0 (Symbol)

17 fun2 52 (ID) 0x7ff28fc02050 (ptr2symb tbl)

17 := 62 (ASSIGNOP) 0 (ASSIGNOP)

17 2.5 57 (REAL) 0 (REAL)

18 end 61 (resword) -1883235584 (NULL)

18 ; 79 (SYMBOL) 0 (Symbol)

20 begin 60 (resword) -1883235664 (NULL)

21 b 52 (ID) 0x7ff28fc01fb0 (ptr2symb tbl)

21 := 62 (ASSIGNOP) 0 (ASSIGNOP)

21 fun2 52 (ID) 0x7ff28fc02050 (ptr2symb tbl)

21 ( 75 (SYMBOL) 0 (Symbol)

21 c 52 (ID) 0x7ff28fc02000 (ptr2symb tbl)

21 [ 76 (SYMBOL) 0 (Symbol)

21 4 57 (INTEGER) 0 (INTEGER)

21 ] 76 (SYMBOL) 1 (Symbol)

21 f 52 (ID) 0x0 (ptr2symb tbl)

21 [ 76 (SYMBOL) 0 (Symbol)

21 5 57 (INTEGER) 0 (INTEGER)

21 ] 76 (SYMBOL) 1 (Symbol)

21 ) 75 (SYMBOL) 1 (Symbol)

21 ; 79 (SYMBOL) 0 (Symbol)

22 b 52 (ID) 0x7ff28fc01fb0 (ptr2symb tbl)

22 := 62 (ASSIGNOP) 0 (ASSIGNOP)

22 fun2 52 (ID) 0x7ff28fc02050 (ptr2symb tbl)

22 ( 75 (SYMBOL) 0 (Symbol)

22 c 52 (ID) 0x7ff28fc02000 (ptr2symb tbl)

22 [ 76 (SYMBOL) 0 (Symbol)

22 4 57 (INTEGER) 0 (INTEGER)

22 ] 76 (SYMBOL) 1 (Symbol)

22 , 78 (SYMBOL) 0 (Symbol)

22 2 57 (INTEGER) 0 (INTEGER)

22 ) 75 (SYMBOL) 1 (Symbol)

23 if 67 (resword) -1883235184 (NULL)

23 ( 75 (SYMBOL) 0 (Symbol)

23 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

23 < 63 (RELOP) 1 (RELOP\_LT)

23 2 57 (INTEGER) 0 (INTEGER)

23 ) 75 (SYMBOL) 1 (Symbol)

23 then 68 (resword) -1883235104 (NULL)

23 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

23 := 62 (ASSIGNOP) 0 (ASSIGNOP)

23 1 57 (INTEGER) 0 (INTEGER)

23 else 69 (resword) -1883235024 (NULL)

23 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

23 := 62 (ASSIGNOP) 0 (ASSIGNOP)

23 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

23 + 64 (SYMBOL) 0 (Symbol)

23 2 57 (INTEGER) 0 (INTEGER)

23 ; 79 (SYMBOL) 0 (Symbol)

24 if 67 (resword) -1883235184 (NULL)

24 ( 75 (SYMBOL) 0 (Symbol)

24 b 52 (ID) 0x7ff28fc01fb0 (ptr2symb tbl)

24 > 63 (RELOP) 2 (RELOP\_GT)

24 4.2 57 (REAL) 0 (REAL)

24 ) 75 (SYMBOL) 1 (Symbol)

24 then 68 (resword) -1883235104 (NULL)

24 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

24 := 62 (ASSIGNOP) 0 (ASSIGNOP)

24 c 52 (ID) 0x7ff28fc02000 (ptr2symb tbl)

24 [ 76 (SYMBOL) 0 (Symbol)

24 a 52 (ID) 0x7ff28fc01f60 (ptr2symb tbl)

24 ] 76 (SYMBOL) 1 (Symbol)

25 end 61 (resword) -1883235584 (NULL)

25 . 74 (SYMBOL) -539864288 (Symbol)

EOF -1 (EOF) 0 (NULL)

**Program with both syntax errors and Lexical Errors**

program test (input, output);

var a : integer;

var b : real;

var c : array [1..2] of integer;

function fun2(x: integer; y: integer) : real;

var e : real;

begin

a:= fun1(x, e, c, b);

x: fun3(c[1], e);

e := e + 4.44;

a:= (a 1mo y) div x;

while ((a >= 4..3) ((b <= e) or (not (a = c[a])))) do

begin

aaaaaaaaaaaaaaaa:= c[a] + 1

end;

fun2 2.5

end;

begin

b:= fun2(c[4], [5]);

b:= fun2(c[4], 2);

if (a < 2) then a:= 1 else a := a 2;

if (b > 4.2) then a := c[a]

end.

Listing File

1 program test (input, output);

2 var a : integer;

3 var b : real;

4 var c : array [1..2] of integer;

5

6 function fun2(x: integer; y: integer) : real;

7 var e : real;

8 begin

9 a:= fun1(x, e, c, b);

10 x: fun3(c[1], e);

tok mismatch expecting :=, [, instead recieved :

11 e := e + 4.44;

12 a:= (a 1mo y) div x;

tok mismatch expecting \* / div mod and,+ - or,< > <= >= <> ==,;,end,else,then,do,,,],), instead recieved 1

13 while ((a >= 4..3) ((b <= e) or (not (a = c[a])))) do

tok mismatch expecting \* / div mod and,+ - or,< > <= >= <> ==,;,end,else,then,do,,,],), instead recieved ..

tok mismatch expecting \* / div mod and,+ - or,< > <= >= <> ==,;,end,else,then,do,,,],), instead recieved (

tok mismatch, expecting token code 71 instead recieved token )

tok mismatch expecting Identifier,begin,if,while instead recieved )

14 begin

15 aaaaaaaaaaaaaaaa:= c[a] + 1

LEXERR: Identifier is greater than 10 characters aaaaaaaaaaa...

16 end;

17 fun2 2.5

tok mismatch expecting function, begin, instead recieved fun2

18 end;

19

20 begin

21 b:= fun2(c[4], [5]);

tok mismatch expecting Identifier, Number, not, +, -, (, instead recieved [

tok mismatch expecting ,, ), instead recieved ]

22 b:= fun2(c[4], 2);

23 if (a < 2) then a:= 1 else a := a 2;

tok mismatch expecting \* / div mod and,+ - or,< > <= >= <> ==,;,end,else,then,do,,,],), instead recieved 2

24 if (b > 4.2) then a := c[a]

25 end.

Token File

Line No. Lexeme TOKEN-TYPE ATTRIBUTE

1 program 50 (resword) -205514656 (NULL)

1 test 52 (ID) 0x0 (ptr2symb tbl)

1 ( 75 (SYMBOL) 0 (Symbol)

1 input 52 (ID) 0x0 (ptr2symb tbl)

1 , 78 (SYMBOL) 0 (Symbol)

1 output 52 (ID) 0x0 (ptr2symb tbl)

1 ) 75 (SYMBOL) 1 (Symbol)

1 ; 79 (SYMBOL) 0 (Symbol)

2 var 51 (resword) -205514576 (NULL)

2 a 52 (ID) 0x0 (ptr2symb tbl)

2 : 80 (SYMBOL) 0 (Symbol)

2 integer 55 (resword) -205514336 (NULL)

2 ; 79 (SYMBOL) 0 (Symbol)

3 var 51 (resword) -205514576 (NULL)

3 b 52 (ID) 0x0 (ptr2symb tbl)

3 : 80 (SYMBOL) 0 (Symbol)

3 real 56 (resword) -205514256 (NULL)

3 ; 79 (SYMBOL) 0 (Symbol)

4 var 51 (resword) -205514576 (NULL)

4 c 52 (ID) 0x0 (ptr2symb tbl)

4 : 80 (SYMBOL) 0 (Symbol)

4 array 53 (resword) -205514496 (NULL)

4 [ 76 (SYMBOL) 0 (Symbol)

4 1 57 (INTEGER) 0 (INTEGER)

4 .. 73 (SYMBOL) -467357296 (Symbol)

4 2 57 (INTEGER) 0 (INTEGER)

4 ] 76 (SYMBOL) 1 (Symbol)

4 of 54 (resword) -205514416 (NULL)

4 integer 55 (resword) -205514336 (NULL)

4 ; 79 (SYMBOL) 0 (Symbol)

6 function 58 (resword) -205514176 (NULL)

6 fun2 52 (ID) 0x0 (ptr2symb tbl)

6 ( 75 (SYMBOL) 0 (Symbol)

6 x 52 (ID) 0x0 (ptr2symb tbl)

6 : 80 (SYMBOL) 0 (Symbol)

6 integer 55 (resword) -205514336 (NULL)

6 ; 79 (SYMBOL) 0 (Symbol)

6 y 52 (ID) 0x0 (ptr2symb tbl)

6 : 80 (SYMBOL) 0 (Symbol)

6 integer 55 (resword) -205514336 (NULL)

6 ) 75 (SYMBOL) 1 (Symbol)

6 : 80 (SYMBOL) 0 (Symbol)

6 real 56 (resword) -205514256 (NULL)

6 ; 79 (SYMBOL) 0 (Symbol)

7 var 51 (resword) -205514576 (NULL)

7 e 52 (ID) 0x0 (ptr2symb tbl)

7 : 80 (SYMBOL) 0 (Symbol)

7 real 56 (resword) -205514256 (NULL)

7 ; 79 (SYMBOL) 0 (Symbol)

8 begin 60 (resword) -205514096 (NULL)

9 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

9 := 62 (ASSIGNOP) 0 (ASSIGNOP)

9 fun1 52 (ID) 0x0 (ptr2symb tbl)

9 ( 75 (SYMBOL) 0 (Symbol)

9 x 52 (ID) 0x7fa8f3c02080 (ptr2symb tbl)

9 , 78 (SYMBOL) 0 (Symbol)

9 e 52 (ID) 0x7fa8f3c02120 (ptr2symb tbl)

9 , 78 (SYMBOL) 0 (Symbol)

9 c 52 (ID) 0x7fa8f3c01fe0 (ptr2symb tbl)

9 , 78 (SYMBOL) 0 (Symbol)

9 b 52 (ID) 0x7fa8f3c01f90 (ptr2symb tbl)

9 ) 75 (SYMBOL) 1 (Symbol)

9 ; 79 (SYMBOL) 0 (Symbol)

10 x 52 (ID) 0x7fa8f3c02080 (ptr2symb tbl)

10 : 80 (SYMBOL) 0 (Symbol)

10 fun3 52 (ID) 0x0 (ptr2symb tbl)

10 ( 75 (SYMBOL) 0 (Symbol)

10 c 52 (ID) 0x7fa8f3c01fe0 (ptr2symb tbl)

10 [ 76 (SYMBOL) 0 (Symbol)

10 1 57 (INTEGER) 0 (INTEGER)

10 ] 76 (SYMBOL) 1 (Symbol)

10 , 78 (SYMBOL) 0 (Symbol)

10 e 52 (ID) 0x7fa8f3c02120 (ptr2symb tbl)

10 ) 75 (SYMBOL) 1 (Symbol)

10 ; 79 (SYMBOL) 0 (Symbol)

11 e 52 (ID) 0x7fa8f3c02120 (ptr2symb tbl)

11 := 62 (ASSIGNOP) 0 (ASSIGNOP)

11 e 52 (ID) 0x7fa8f3c02120 (ptr2symb tbl)

11 + 64 (SYMBOL) 0 (Symbol)

11 4.44 57 (REAL) 0 (REAL)

11 ; 79 (SYMBOL) 0 (Symbol)

12 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

12 := 62 (ASSIGNOP) 0 (ASSIGNOP)

12 ( 75 (SYMBOL) 0 (Symbol)

12 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

12 1 57 (INTEGER) 0 (INTEGER)

12 mo 52 (ID) 0x0 (ptr2symb tbl)

12 y 52 (ID) 0x7fa8f3c020d0 (ptr2symb tbl)

12 ) 75 (SYMBOL) 1 (Symbol)

12 div 65 (resword) -205513856 (NULL)

12 x 52 (ID) 0x7fa8f3c02080 (ptr2symb tbl)

12 ; 79 (SYMBOL) 0 (Symbol)

13 while 70 (resword) -205513376 (NULL)

13 ( 75 (SYMBOL) 0 (Symbol)

13 ( 75 (SYMBOL) 0 (Symbol)

13 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

13 4 57 (INTEGER) 0 (INTEGER)

13 .. 73 (SYMBOL) -467360048 (Symbol)

13 3 57 (INTEGER) 0 (INTEGER)

13 ) 75 (SYMBOL) 1 (Symbol)

13 ( 75 (SYMBOL) 0 (Symbol)

13 ( 75 (SYMBOL) 0 (Symbol)

13 b 52 (ID) 0x7fa8f3c01f90 (ptr2symb tbl)

13 <= 63 (RELOP) 3 (RELOP\_LE)

13 e 52 (ID) 0x7fa8f3c02120 (ptr2symb tbl)

13 ) 75 (SYMBOL) 1 (Symbol)

13 or 64 (resword) -205513936 (NULL)

13 ( 75 (SYMBOL) 0 (Symbol)

13 not 72 (resword) 0 (NULL)

13 ( 75 (SYMBOL) 0 (Symbol)

13 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

13 = 63 (RELOP) 0 (RELOP\_EQ)

13 c 52 (ID) 0x7fa8f3c01fe0 (ptr2symb tbl)

13 [ 76 (SYMBOL) 0 (Symbol)

13 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

13 ] 76 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 ) 75 (SYMBOL) 1 (Symbol)

13 do 71 (resword) -205513296 (NULL)

14 begin 60 (resword) -205514096 (NULL)

15 aaaaaaaaaaa... 77 (LEXERROR) 0 (IDTOOLONG)

15 := 62 (ASSIGNOP) 0 (ASSIGNOP)

15 c 52 (ID) 0x7fa8f3c01fe0 (ptr2symb tbl)

15 [ 76 (SYMBOL) 0 (Symbol)

15 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

15 ] 76 (SYMBOL) 1 (Symbol)

15 + 64 (SYMBOL) 0 (Symbol)

15 1 57 (INTEGER) 0 (INTEGER)

16 end 61 (resword) -205514016 (NULL)

16 ; 79 (SYMBOL) 0 (Symbol)

17 fun2 52 (ID) 0x7fa8f3c02030 (ptr2symb tbl)

17 2.5 57 (REAL) 0 (REAL)

18 end 61 (resword) -205514016 (NULL)

18 ; 79 (SYMBOL) 0 (Symbol)

20 begin 60 (resword) -205514096 (NULL)

21 b 52 (ID) 0x7fa8f3c01f90 (ptr2symb tbl)

21 := 62 (ASSIGNOP) 0 (ASSIGNOP)

21 fun2 52 (ID) 0x7fa8f3c02030 (ptr2symb tbl)

21 ( 75 (SYMBOL) 0 (Symbol)

21 c 52 (ID) 0x7fa8f3c01fe0 (ptr2symb tbl)

21 [ 76 (SYMBOL) 0 (Symbol)

21 4 57 (INTEGER) 0 (INTEGER)

21 ] 76 (SYMBOL) 1 (Symbol)

21 , 78 (SYMBOL) 0 (Symbol)

21 [ 76 (SYMBOL) 0 (Symbol)

21 5 57 (INTEGER) 0 (INTEGER)

21 ] 76 (SYMBOL) 1 (Symbol)

21 ) 75 (SYMBOL) 1 (Symbol)

21 ; 79 (SYMBOL) 0 (Symbol)

22 b 52 (ID) 0x7fa8f3c01f90 (ptr2symb tbl)

22 := 62 (ASSIGNOP) 0 (ASSIGNOP)

22 fun2 52 (ID) 0x7fa8f3c02030 (ptr2symb tbl)

22 ( 75 (SYMBOL) 0 (Symbol)

22 c 52 (ID) 0x7fa8f3c01fe0 (ptr2symb tbl)

22 [ 76 (SYMBOL) 0 (Symbol)

22 4 57 (INTEGER) 0 (INTEGER)

22 ] 76 (SYMBOL) 1 (Symbol)

22 , 78 (SYMBOL) 0 (Symbol)

22 2 57 (INTEGER) 0 (INTEGER)

22 ) 75 (SYMBOL) 1 (Symbol)

22 ; 79 (SYMBOL) 0 (Symbol)

23 if 67 (resword) -205513616 (NULL)

23 ( 75 (SYMBOL) 0 (Symbol)

23 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

23 < 63 (RELOP) 1 (RELOP\_LT)

23 2 57 (INTEGER) 0 (INTEGER)

23 ) 75 (SYMBOL) 1 (Symbol)

23 then 68 (resword) -205513536 (NULL)

23 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

23 := 62 (ASSIGNOP) 0 (ASSIGNOP)

23 1 57 (INTEGER) 0 (INTEGER)

23 else 69 (resword) -205513456 (NULL)

23 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

23 := 62 (ASSIGNOP) 0 (ASSIGNOP)

23 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

23 2 57 (INTEGER) 0 (INTEGER)

23 ; 79 (SYMBOL) 0 (Symbol)

24 if 67 (resword) -205513616 (NULL)

24 ( 75 (SYMBOL) 0 (Symbol)

24 b 52 (ID) 0x7fa8f3c01f90 (ptr2symb tbl)

24 > 63 (RELOP) 2 (RELOP\_GT)

24 4.2 57 (REAL) 0 (REAL)

24 ) 75 (SYMBOL) 1 (Symbol)

24 then 68 (resword) -205513536 (NULL)

24 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

24 := 62 (ASSIGNOP) 0 (ASSIGNOP)

24 c 52 (ID) 0x7fa8f3c01fe0 (ptr2symb tbl)

24 [ 76 (SYMBOL) 0 (Symbol)

24 a 52 (ID) 0x7fa8f3c01f40 (ptr2symb tbl)

24 ] 76 (SYMBOL) 1 (Symbol)

25 end 61 (resword) -205514016 (NULL)

25 . 74 (SYMBOL) -467356912 (Symbol)

EOF -1 (EOF) 0 (NULL)