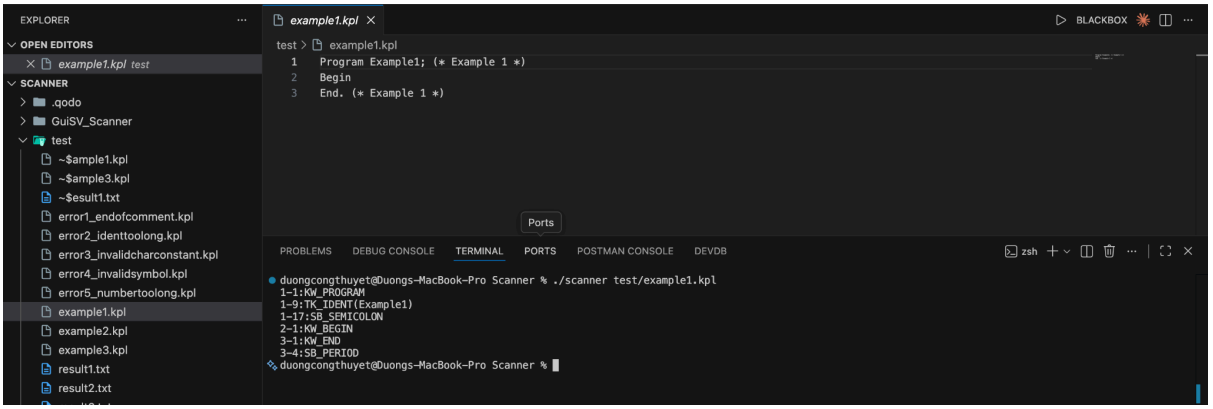
Báo cáo LAB01
IT3323 Mã lớp 161269
Bài 1 : Phân tích từ vựng

Họ và tên: Dương Công Thuyết
Mã số sinh viên: 20225932

1. Nội dung đã sửa

2 hàm đã được modify trong code. (Token *getToken(void) và int scan(char *fileName))

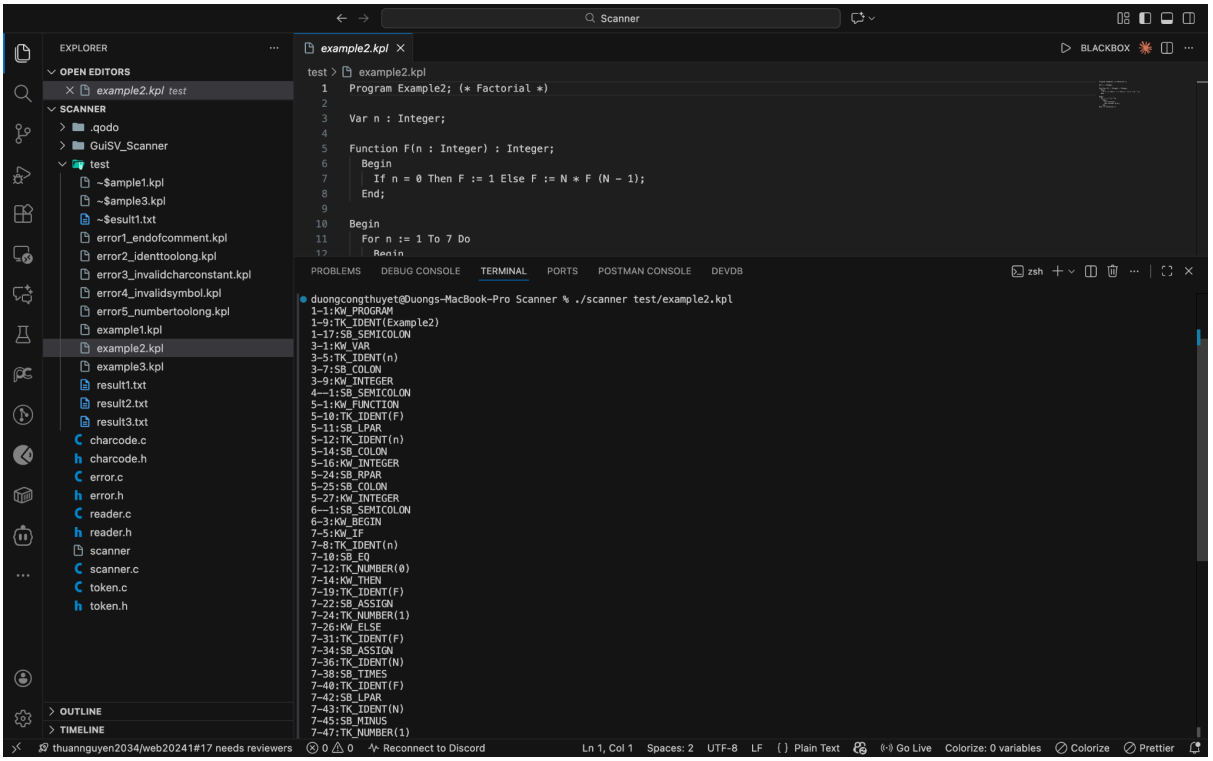
2. Kết quả chạy với example1.kpl

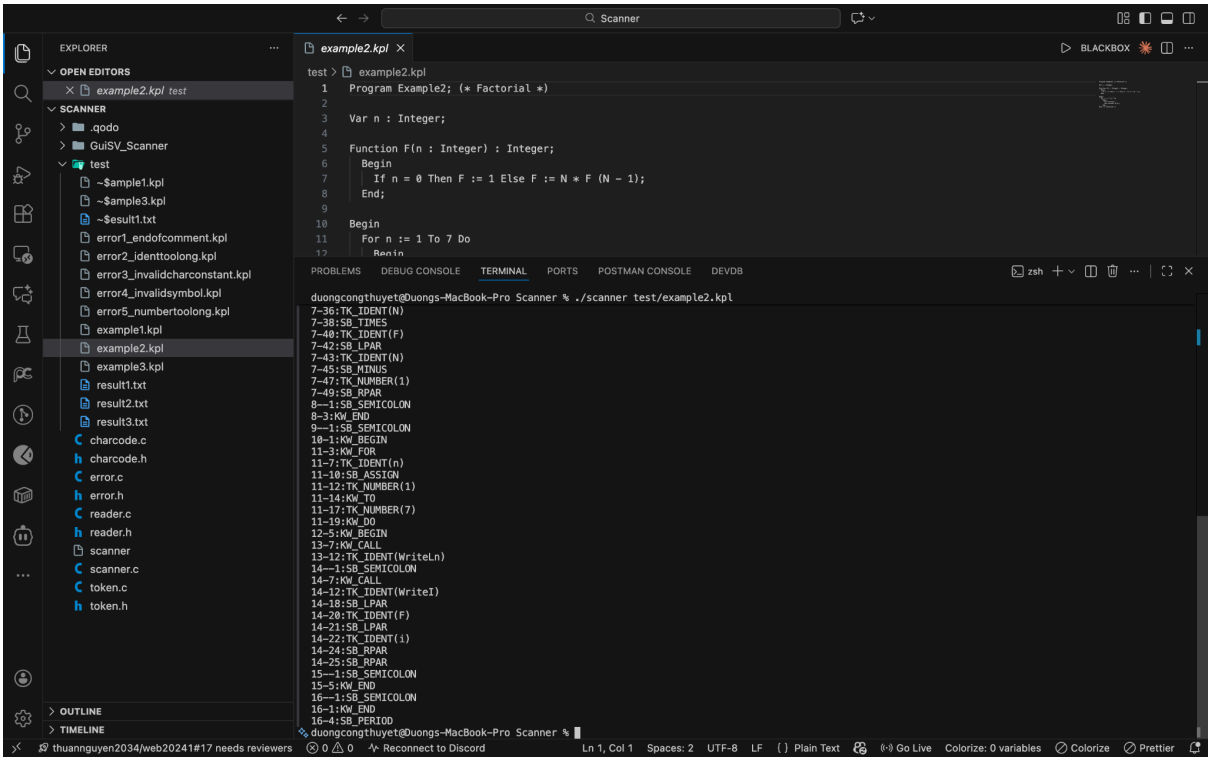


text:

1-1:KW_PROGRAM
1-9:TK_IDENT(Example1)
1-17:SB_SEMICOLON
2-1:KW_BEGIN
3-1:KW_END
3-4:SB_PERIOD

3. Kết quả chạy với example2.kpl





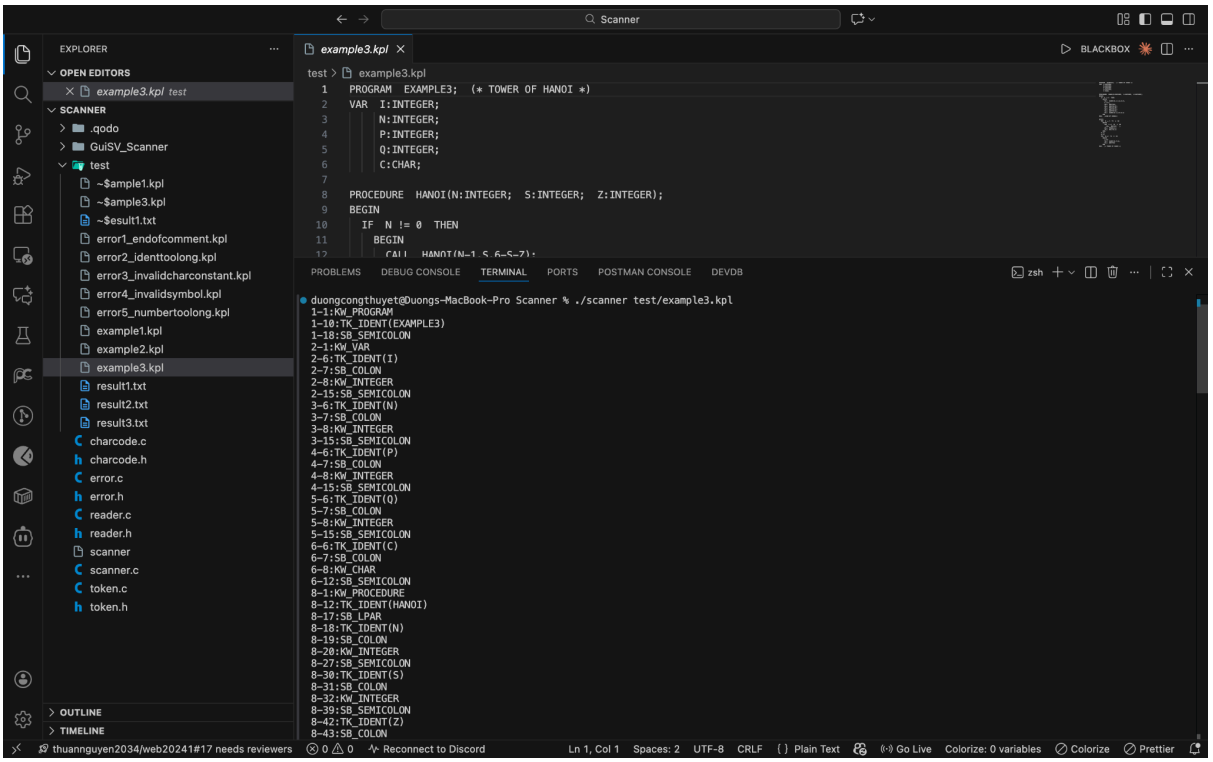
text:

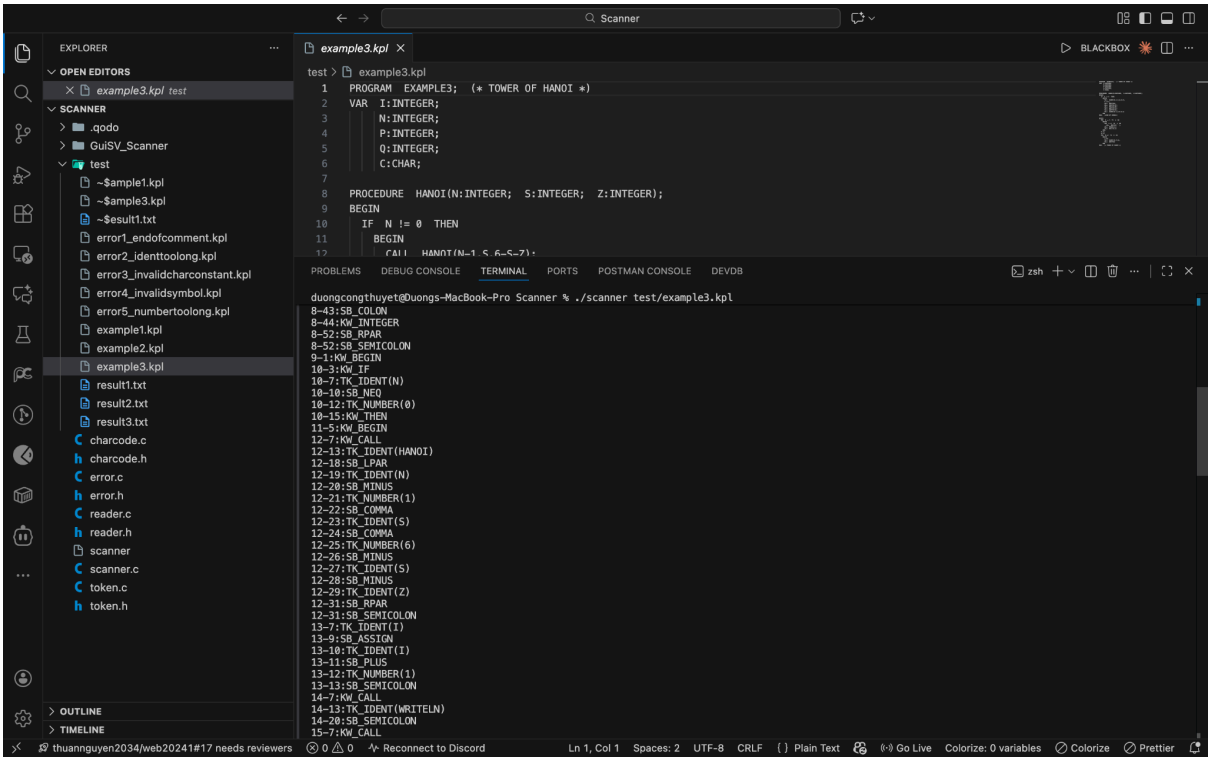
1-1:KW_PROGRAM
1-9:TK_IDENT(Example2)
1-17:SB_SEMICOLON
3-1:KW_VAR
3-5:TK_IDENT(n)
3-7:SB_COLON

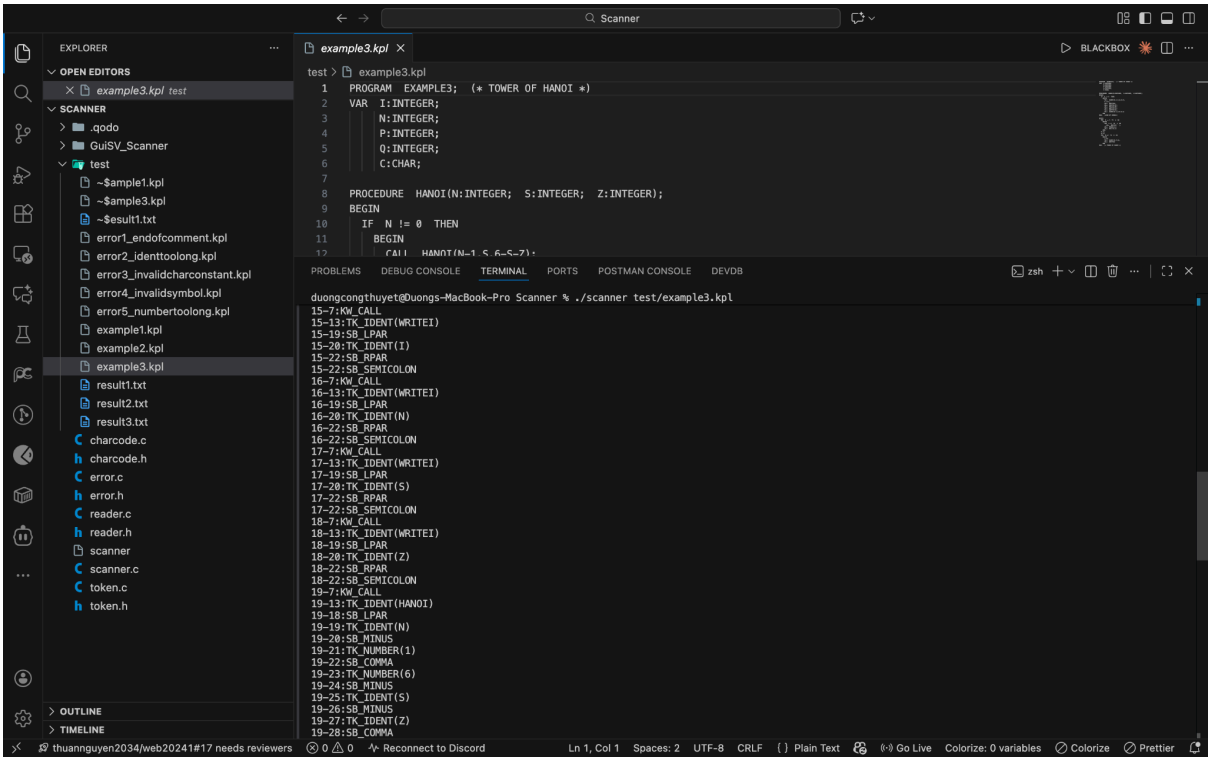
3-9:KW_INTEGER
4--1:SB_SEMICOLON
5-1:KW_FUNCTION
5-10:TK_IDENT(F)
5-11:SB_LPAR
5-12:TK_IDENT(n)
5-14:SB_COLON
5-16:KW_INTEGER
5-24:SB_RPAR
5-25:SB_COLON
5-27:KW_INTEGER
6--1:SB_SEMICOLON
6-3:KW_BEGIN
7-5:KW_IF
7-8:TK_IDENT(n)
7-10:SB_EQ
7-12:TK_NUMBER(0)
7-14:KW_THEN
7-19:TK_IDENT(F)
7-22:SB_ASSIGN
7-24:TK_NUMBER(1)
7-26:KW_ELSE
7-31:TK_IDENT(F)
7-34:SB_ASSIGN
7-36:TK_IDENT(N)
7-38:SB_TIMES
7-40:TK_IDENT(F)
7-42:SB_LPAR
7-43:TK_IDENT(N)
7-45:SB_MINUS
7-47:TK_NUMBER(1)
7-49:SB_RPAR
8--1:SB_SEMICOLON
8-3:KW_END
9--1:SB_SEMICOLON
10-1:KW_BEGIN
11-3:KW_FOR
11-7:TK_IDENT(n)
11-10:SB_ASSIGN
11-12:TK_NUMBER(1)
11-14:KW_TO
11-17:TK_NUMBER(7)

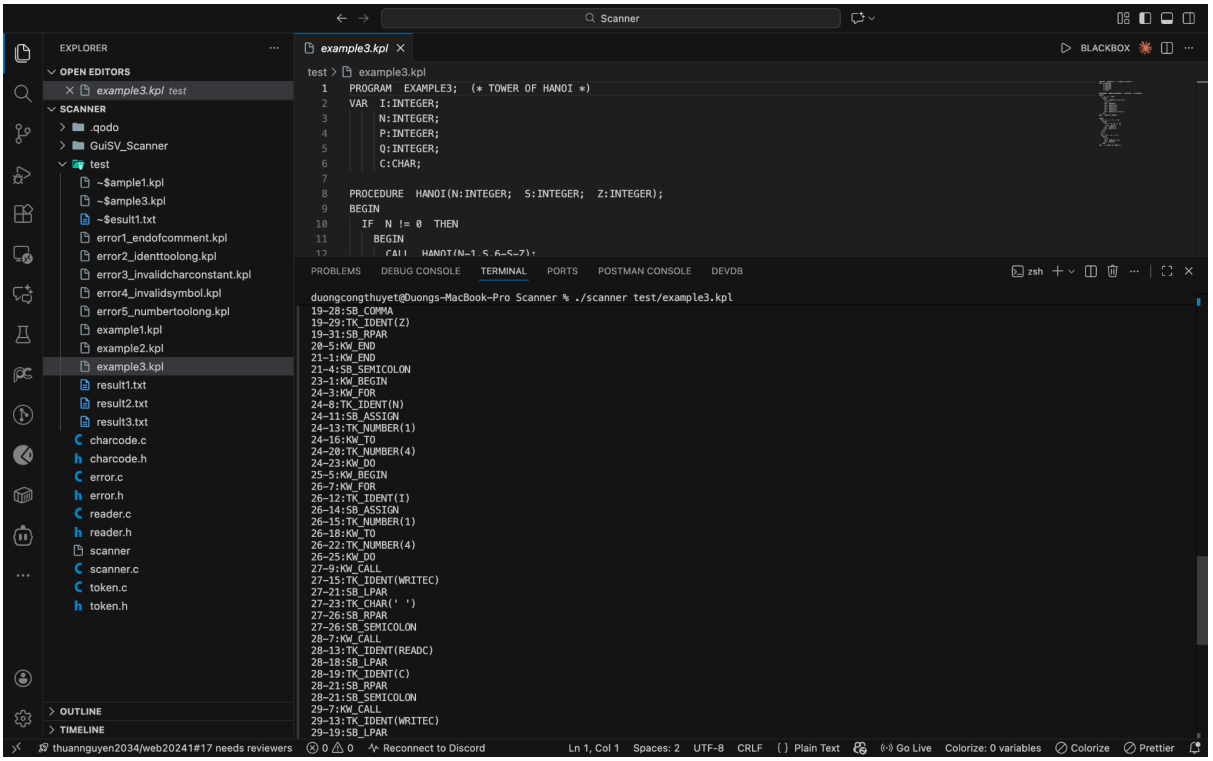
11-19:KW_DO
12-5:KW_BEGIN
13-7:KW_CALL
13-12:TK_IDENT(WriteLn)
14--1:SB_SEMICOLON
14-7:KW_CALL
14-12:TK_IDENT(WriteI)
14-18:SB_LPAR
14-20:TK_IDENT(F)
14-21:SB_LPAR
14-22:TK_IDENT(i)
14-24:SB_RPAR
14-25:SB_RPAR
15--1:SB_SEMICOLON
15-5:KW_END
16--1:SB_SEMICOLON
16-1:KW_END
16-4:SB_PERIOD

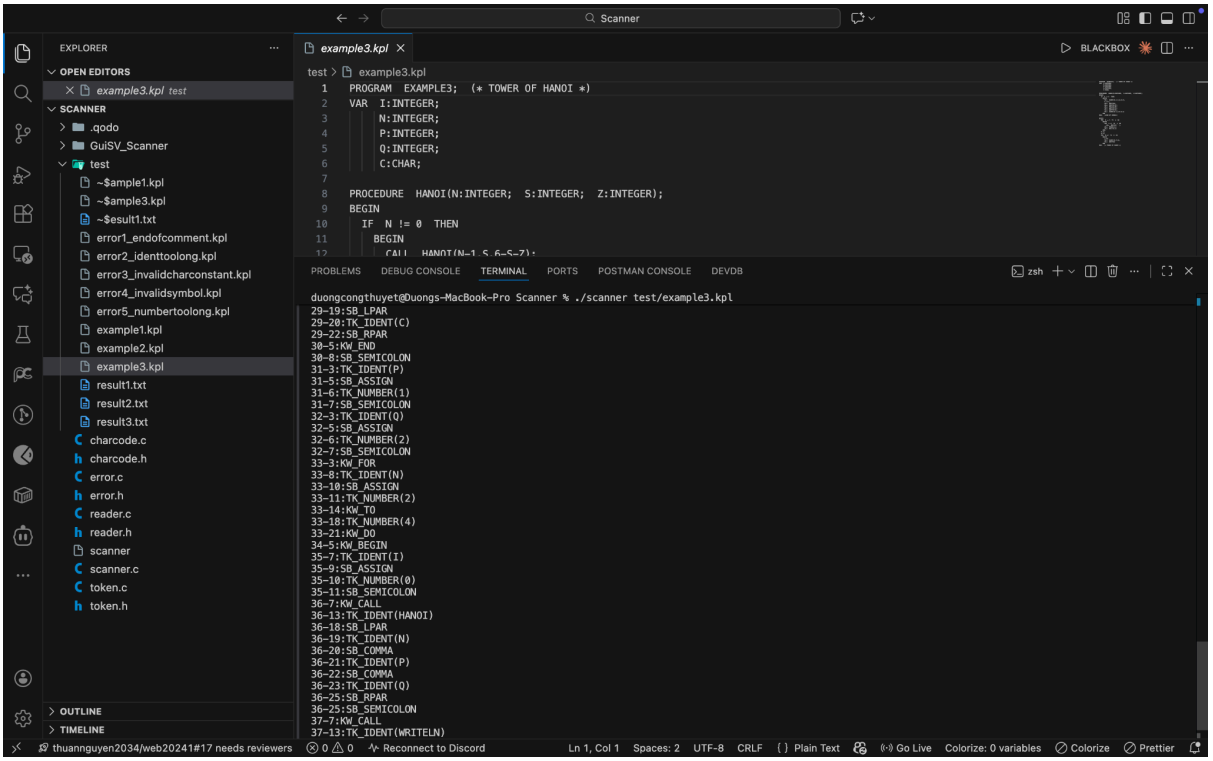
4. Kết quả chạy với example3.kpl




Scanner
EXPLORER
example3.kpl
BLACKBOX
OPEN EDITORS
example3.kpl test
SCANNER
.qodo
GuiSV_Scanner
test
~$ample1.kpl
~$ample3.kpl
~$esult1.txt
error1_endofcomment.kpl
error2_identtoolong.kpl
error3_invalidcharconstant.kpl
error4_invalidsymbol.kpl
error5_numbertoolong.kpl
example1.kpl
example2.kpl
example3.kpl
result1.txt
result2.txt
result3.txt
charcode.c
charcode.h
error.c
error.h
reader.c
reader.h
scanner
scanner.c
token.c
token.h
OUTLINE
TIMELINE
test > example3.kpl
1 PROGRAM EXAMPLE3; (* TOWER OF HANOI *)
2 VAR I:INTEGER;
3 N:INTEGER;
4 P:INTEGER;
5 Q:INTEGER;
6 C:CHAR;
7
8 PROCEDURE HANOI(N:INTEGER; S:INTEGER; Z:INTEGER);
9 BEGIN
10 IF N != 0 THEN
11 BEGIN
PROBLEMS
DEBUG CONSOLE
TERMINAL
PORTS
POSTMAN CONSOLE
DEVDB
zsh
duongcongthuyet@Duongs-MacBook-Pro Scanner % ./scanner test/example3.kpl
8-43:SB_COLON
8-44:KW_INTEGER
8-52:SB_RPAR
8-52:SB_SEMICOLON
9-1:KW_BEGIN
10-3:KW_IF
10-7:TK_IDENT(N)
10-10:SB_NEQ
10-12:TK_NUMBER(0)
10-15:KW_THEN
11-5:KW_BEGIN
12-7:KW_CALL
12-13:TK_IDENT(HANOI)
12-18:SB_LPAR
12-19:TK_IDENT(N)
12-20:SB_MINUS
12-21:TK_NUMBER(1)
12-22:SB_COMMA
12-23:TK_IDENT(S)
12-24:SB_COMMA
12-25:TK_NUMBER(6)
12-26:SB_MINUS
12-27:TK_IDENT(S)
12-28:SB_MINUS
12-29:TK_IDENT(Z)
12-31:SB_RPAR
12-31:SB_SEMICOLON
13-7:TK_IDENT(I)
13-9:SB_ASSIGN
13-10:TK_IDENT(I)
13-11:SB_PLUS
13-12:TK_NUMBER(1)
13-13:SB_SEMICOLON
14-7:KW_CALL
14-13:TK_IDENT(WRITELN)
14-20:SB_SEMICOLON
15-7:KW_CALL
thuannguyen2034/web20241#17 needs reviewers
Reconnect to Discord
Ln 1, Col 1
Spaces: 2
UTF-8
CRLF
Plain Text
Go Live
Colorize: 0 variables
Colorize
Prettier


Scanner
EXPLORER
example3.kpl
BLACKBOX
OPEN EDITORS
example3.kpl test
SCANNER
.qodo
GuiSV_Scanner
test
~$ample1.kpl
~$ample3.kpl
~$esult1.txt
error1_endofcomment.kpl
error2_identtoolong.kpl
error3_invalidcharconstant.kpl
error4_invalidsymbol.kpl
error5_numbertoolong.kpl
example1.kpl
example2.kpl
example3.kpl
result1.txt
result2.txt
result3.txt
charcode.c
charcode.h
error.c
error.h
reader.c
reader.h
scanner
scanner.c
token.c
token.h
OUTLINE
TIMELINE
test > example3.kpl
1 PROGRAM EXAMPLE3; (* TOWER OF HANOI *)
2 VAR I:INTEGER;
3 N:INTEGER;
4 P:INTEGER;
5 Q:INTEGER;
6 C:CHAR;
7
8 PROCEDURE HANOI(N:INTEGER; S:INTEGER; Z:INTEGER);
9 BEGIN
10 IF N != 0 THEN
11 BEGIN
PROBLEMS
DEBUG CONSOLE
TERMINAL
PORTS
POSTMAN CONSOLE
DEVDB
zsh
duongcongthuyet@Duongs-MacBook-Pro Scanner % ./scanner test/example3.kpl
15-7:KW_CALL
15-13:TK_IDENT(WRITEI)
15-19:SB_LPAR
15-20:TK_IDENT(I)
15-22:SB_RPAR
15-22:SB_SEMICOLON
16-7:KW_CALL
16-13:TK_IDENT(WRITEI)
16-19:SB_LPAR
16-20:TK_IDENT(N)
16-22:SB_RPAR
16-22:SB_SEMICOLON
17-7:KW_CALL
17-13:TK_IDENT(WRITEI)
17-19:SB_LPAR
17-20:TK_IDENT(S)
17-22:SB_RPAR
17-22:SB_SEMICOLON
18-7:KW_CALL
18-13:TK_IDENT(WRITEI)
18-19:SB_LPAR
18-20:TK_IDENT(Z)
18-22:SB_RPAR
18-22:SB_SEMICOLON
19-7:KW_CALL
19-13:TK_IDENT(HANOI)
19-18:SB_LPAR
19-19:TK_IDENT(N)
19-20:SB_MINUS
19-21:TK_NUMBER(1)
19-22:SB_COMMA
19-23:TK_NUMBER(6)
19-24:SB_MINUS
19-25:TK_IDENT(S)
19-26:SB_MINUS
19-27:TK_IDENT(Z)
19-28:SB_COMMA
thuannguyen2034/web20241#17 needs reviewers
Reconnect to Discord
Ln 1, Col 1
Spaces: 2
UTF-8
CRLF
Plain Text
Go Live
Colorize: 0 variables
Colorize
Prettier


Scanner
EXPLORER
OPEN EDITORS
example3.kpl test
SCANNER
.qodo
GuiSV_Scanner
test
~$ample1.kpl
~$ample3.kpl
~$esult1.txt
error1_endofcomment.kpl
error2_identtoolong.kpl
error3_invalidcharconstant.kpl
error4_invalidsymbol.kpl
error5_numbertoolong.kpl
example1.kpl
example2.kpl
example3.kpl
result1.txt
result2.txt
result3.txt
charcode.c
charcode.h
error.c
error.h
reader.c
reader.h
scanner
scanner.c
token.c
token.h
OUTLINE
TIMELINE
example3.kpl
BLACKBOX
test > example3.kpl
1 PROGRAM EXAMPLE3; (* TOWER OF HANOI *)
2 VAR I:INTEGER;
3 N:INTEGER;
4 P:INTEGER;
5 Q:INTEGER;
6 C:CHAR;
7
8 PROCEDURE HANOI(N:INTEGER; S:INTEGER; Z:INTEGER);
9 BEGIN
10 IF N != 0 THEN
11 BEGIN
PROBLEMS
DEBUG CONSOLE
TERMINAL
PORTS
POSTMAN CONSOLE
DEVDB
zsh
duongcongthuyet@Duongs-MacBook-Pro Scanner % ./scanner test/example3.kpl
19-28:SB_COMMA
19-29:TK_IDENT(Z)
19-31:SB_RPAR
20-5:KW_END
21-1:KW_END
21-4:SB_SEMICOLON
23-1:KW_BEGIN
24-3:KW_FOR
24-8:TK_IDENT(N)
24-11:SB_ASSIGN
24-13:TK_NUMBER(1)
24-16:KW_TO
24-20:TK_NUMBER(4)
24-23:KW_DO
25-5:KW_BEGIN
26-7:KW_FOR
26-12:TK_IDENT(I)
26-14:SB_ASSIGN
26-15:TK_NUMBER(1)
26-18:KW_TO
26-22:TK_NUMBER(4)
26-25:KW_DO
27-9:KW_CALL
27-15:TK_IDENT(WRITEC)
27-21:SB_LPAR
27-23:TK_CHAR(' ')
27-26:SB_RPAR
27-26:SB_SEMICOLON
28-7:KW_CALL
28-13:TK_IDENT(READC)
28-18:SB_LPAR
28-19:TK_IDENT(C)
28-21:SB_RPAR
28-21:SB_SEMICOLON
29-7:KW_CALL
29-13:TK_IDENT(WRITEC)
29-19:SB_LPAR
thuannguyen2034/web20241#17 needs reviewers
Reconnect to Discord
Ln 1, Col 1
Spaces: 2
UTF-8
CRLF
Plain Text
Go Live
Colorize: 0 variables
Colorize
Prettier


Scanner
EXPLORER
OPEN EDITORS
example3.kpl test
SCANNER
.qodo
GuiSV_Scanner
test
~$ample1.kpl
~$ample3.kpl
~$esult1.txt
error1_endofcomment.kpl
error2_identtoolong.kpl
error3_invalidcharconstant.kpl
error4_invalidsymbol.kpl
error5_numbertoolong.kpl
example1.kpl
example2.kpl
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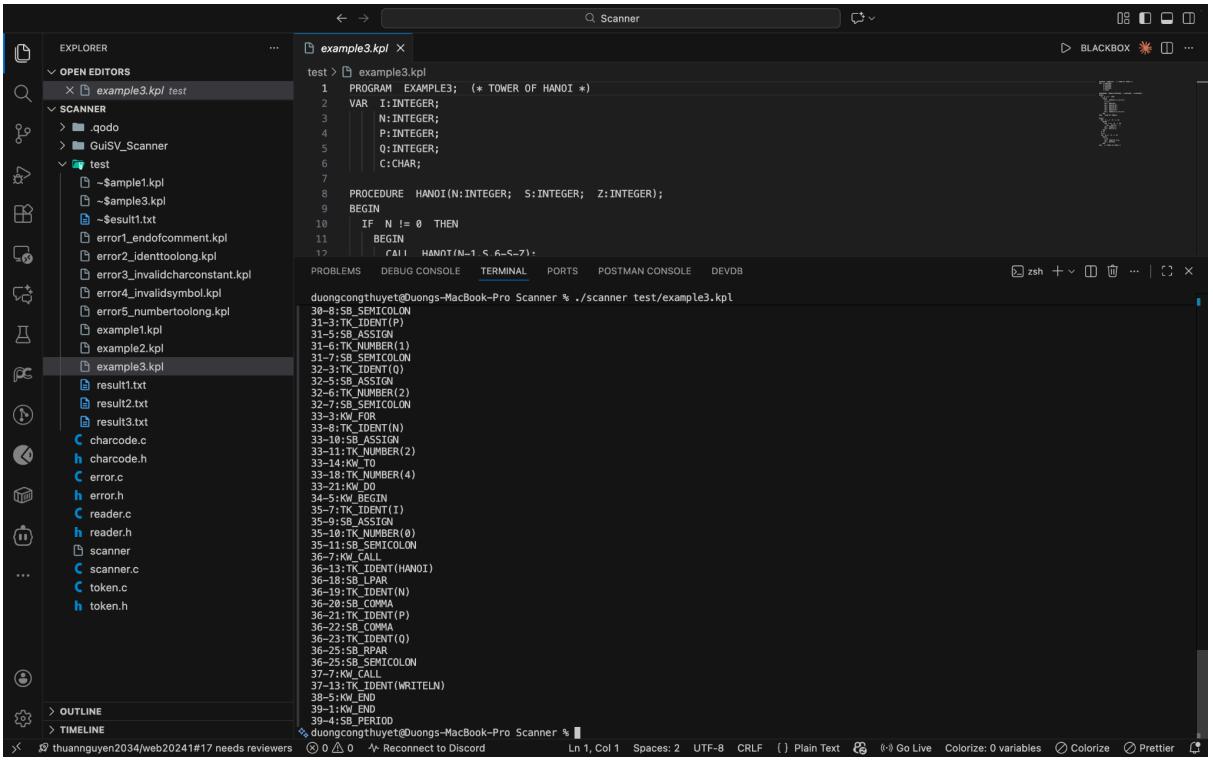
charcode.h
error.c
error.h
reader.c
reader.h
scanner
scanner.c
token.c
token.h
OUTLINE
TIMELINE
example3.kpl
BLACKBOX
test > example3.kpl
1 PROGRAM EXAMPLE3; (* TOWER OF HANOI *)
2 VAR I:INTEGER;
3 N:INTEGER;
4 P:INTEGER;
5 Q:INTEGER;
6 C:CHAR;
7
8 PROCEDURE HANOI(N:INTEGER; S:INTEGER; Z:INTEGER);
9 BEGIN
10 IF N != 0 THEN
11 BEGIN
PROBLEMS
DEBUG CONSOLE
TERMINAL
PORTS
POSTMAN CONSOLE
DEVDB
zsh
duongcongthuyet@Duongs-MacBook-Pro Scanner % ./scanner test/example3.kpl
29-19:SB_LPAR
29-20:TK_IDENT(C)
29-22:SB_RPAR
30-5:KW_END
30-8:SB_SEMICOLON
31-3:TK_IDENT(P)
31-5:SB_ASSIGN
31-6:TK_NUMBER(1)
31-7:SB_SEMICOLON
32-3:TK_IDENT(Q)
32-5:SB_ASSIGN
32-6:TK_NUMBER(2)
32-7:SB_SEMICOLON
33-3:KW_FOR
33-8:TK_IDENT(N)
33-10:SB_ASSIGN
33-11:TK_NUMBER(2)
33-14:KW_TO
33-18:TK_NUMBER(4)
33-21:KW_DO
34-5:KW_BEGIN
35-7:TK_IDENT(I)
35-9:SB_ASSIGN
35-10:TK_NUMBER(0)
35-11:SB_SEMICOLON
36-7:KW_CALL
36-13:TK_IDENT(HANOI)
36-18:SB_LPAR
36-19:TK_IDENT(N)
36-20:SB_COMMA
36-21:TK_IDENT(P)
36-22:SB_COMMA
36-23:TK_IDENT(Q)
36-25:SB_RPAR
36-25:SB_SEMICOLON
37-7:KW_CALL
37-13:TK_IDENT(WRITELN)
thuannguyen2034/web20241#17 needs reviewers
Reconnect to Discord
Ln 1, Col 1
Spaces: 2
UTF-8
CRLF
Plain Text
Go Live
Colorize: 0 variables
Colorize
Prettier



text:
1-1:KW_PROGRAM
1-10:TK_IDENT(EXAMPLE3)
1-18:SB_SEMICOLON
2-1:KW_VAR
2-6:TK_IDENT(I)
2-7:SB_COLON
2-8:KW_INTEGER
2-15:SB_SEMICOLON
3-6:TK_IDENT(N)
3-7:SB_COLON
3-8:KW_INTEGER
3-15:SB_SEMICOLON
4-6:TK_IDENT(P)
4-7:SB_COLON
4-8:KW_INTEGER
4-15:SB_SEMICOLON
5-6:TK_IDENT(Q)
5-7:SB_COLON
5-8:KW_INTEGER
5-15:SB_SEMICOLON
6-6:TK_IDENT(C)
6-7:SB_COLON
6-8:KW_CHAR

6-12:SB_SEMICOLON
8-1:KW_PROCEDURE
8-12:TK_IDENT(HANOI)
8-17:SB_LPAR
8-18:TK_IDENT(N)
8-19:SB_COLON
8-20:KW_INTEGER
8-27:SB_SEMICOLON
8-30:TK_IDENT(S)
8-31:SB_COLON
8-32:KW_INTEGER
8-39:SB_SEMICOLON
8-42:TK_IDENT(Z)
8-43:SB_COLON
8-44:KW_INTEGER
8-52:SB_RPAR
8-52:SB_SEMICOLON
9-1:KW_BEGIN
10-3:KW_IF
10-7:TK_IDENT(N)
10-10:SB_NEQ
10-12:TK_NUMBER(0)
10-15:KW_THEN
11-5:KW_BEGIN
12-7:KW_CALL
12-13:TK_IDENT(HANOI)
12-18:SB_LPAR
12-19:TK_IDENT(N)
12-20:SB_MINUS
12-21:TK_NUMBER(1)
12-22:SB_COMMA
12-23:TK_IDENT(S)
12-24:SB_COMMA
12-25:TK_NUMBER(6)
12-26:SB_MINUS
12-27:TK_IDENT(S)
12-28:SB_MINUS
12-29:TK_IDENT(Z)
12-31:SB_RPAR
12-31:SB_SEMICOLON
13-7:TK_IDENT(I)
13-9:SB_ASSIGN

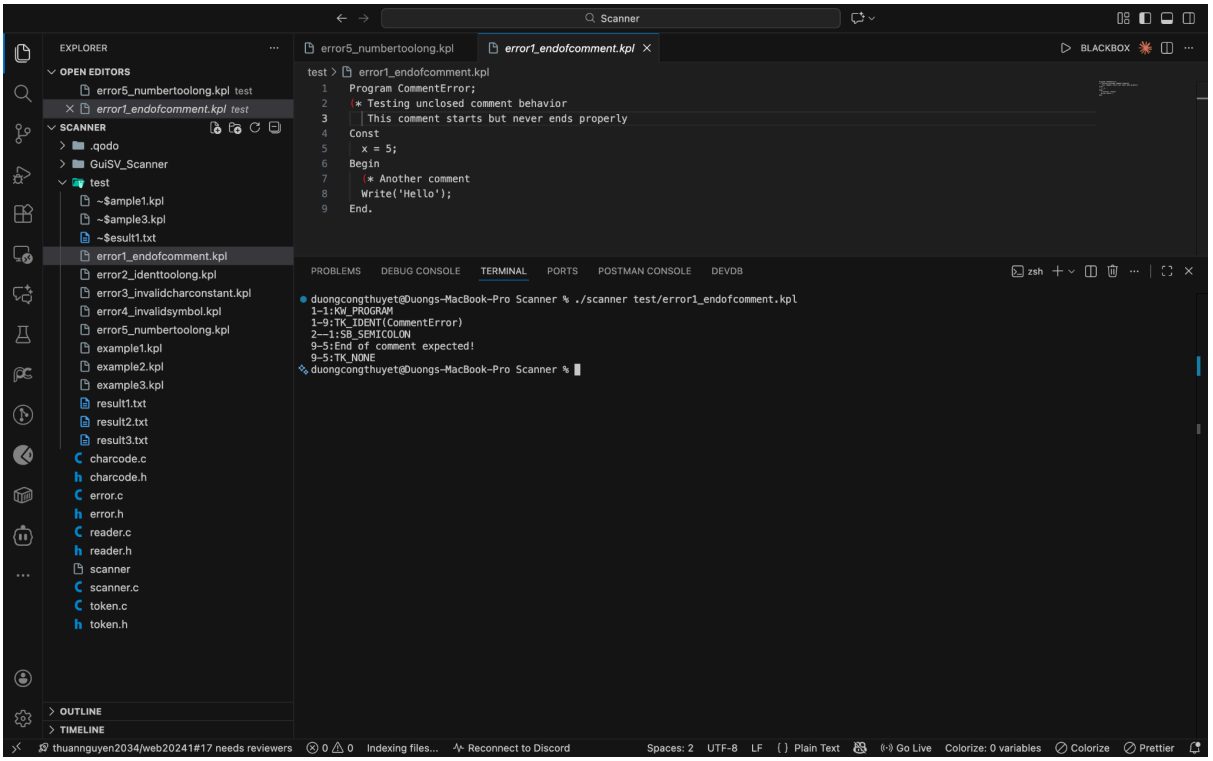
13-10:TK_IDENT(I)
13-11:SB_PLUS
13-12:TK_NUMBER(1)
13-13:SB_SEMICOLON
14-7:KW_CALL
14-13:TK_IDENT(WRITELN)
14-20:SB_SEMICOLON
15-7:KW_CALL
15-13:TK_IDENT(WRITEI)
15-19:SB_LPAR
15-20:TK_IDENT(I)
15-22:SB_RPAR
15-22:SB_SEMICOLON
16-7:KW_CALL
16-13:TK_IDENT(WRITEI)
16-19:SB_LPAR
16-20:TK_IDENT(N)
16-22:SB_RPAR
16-22:SB_SEMICOLON
17-7:KW_CALL
17-13:TK_IDENT(WRITEI)
17-19:SB_LPAR
17-20:TK_IDENT(S)
17-22:SB_RPAR
17-22:SB_SEMICOLON
18-7:KW_CALL
18-13:TK_IDENT(WRITEI)
18-19:SB_LPAR
18-20:TK_IDENT(Z)
18-22:SB_RPAR
18-22:SB_SEMICOLON
19-7:KW_CALL
19-13:TK_IDENT(HANOI)
19-18:SB_LPAR
19-19:TK_IDENT(N)
19-20:SB_MINUS
19-21:TK_NUMBER(1)
19-22:SB_COMMA
19-23:TK_NUMBER(6)
19-24:SB_MINUS
19-25:TK_IDENT(S)
19-26:SB_MINUS

19-27:TK_IDENT(Z)
19-28:SB_COMMA
19-29:TK_IDENT(Z)
19-31:SB_RPAR
20-5:KW_END
21-1:KW_END
21-4:SB_SEMICOLON
23-1:KW_BEGIN
24-3:KW_FOR
24-8:TK_IDENT(N)
24-11:SB_ASSIGN
24-13:TK_NUMBER(1)
24-16:KW_TO
24-20:TK_NUMBER(4)
24-23:KW_DO
25-5:KW_BEGIN
26-7:KW_FOR
26-12:TK_IDENT(I)
26-14:SB_ASSIGN
26-15:TK_NUMBER(1)
26-18:KW_TO
26-22:TK_NUMBER(4)
26-25:KW_DO
27-9:KW_CALL
27-15:TK_IDENT(WRITEC)
27-21:SB_LPAR
27-23:TK_CHAR(' ')
27-26:SB_RPAR
27-26:SB_SEMICOLON
28-7:KW_CALL
28-13:TK_IDENT(READC)
28-18:SB_LPAR
28-19:TK_IDENT(C)
28-21:SB_RPAR
28-21:SB_SEMICOLON
29-7:KW_CALL
29-13:TK_IDENT(WRITEC)
29-19:SB_LPAR
29-20:TK_IDENT(C)
29-22:SB_RPAR
30-5:KW_END
30-8:SB_SEMICOLON

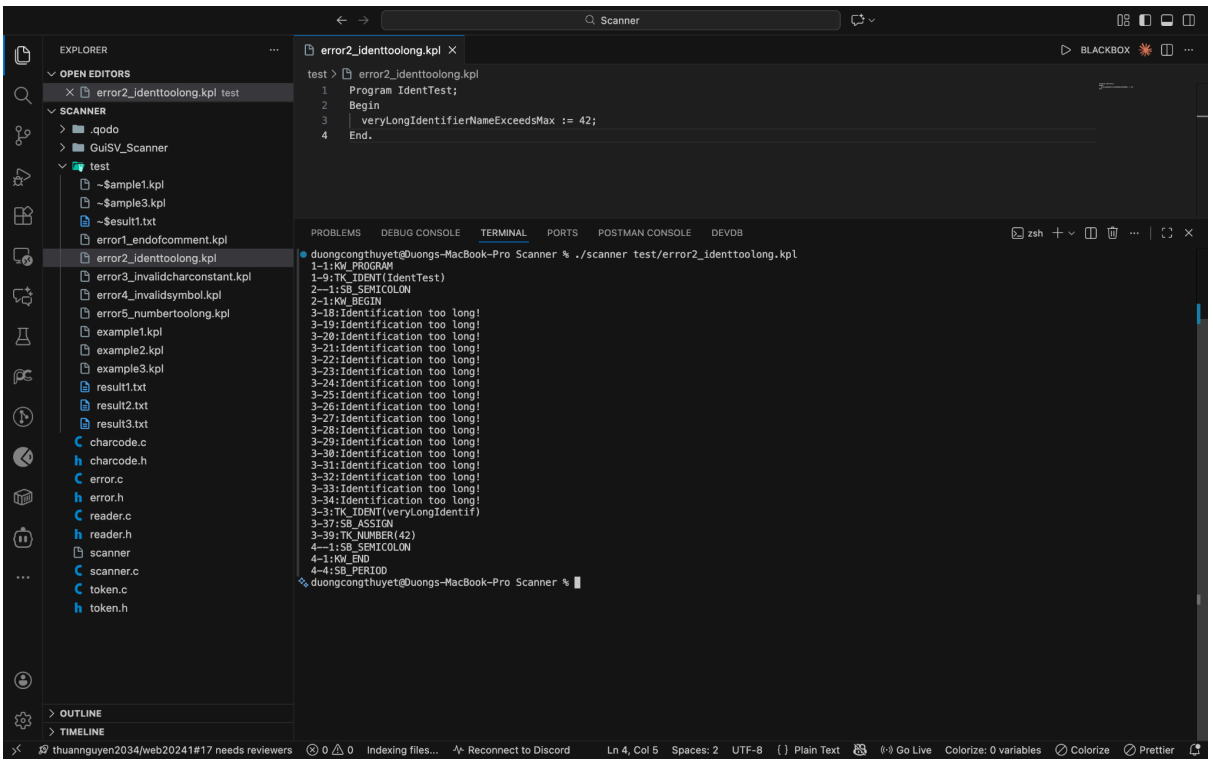
31-3:TK_IDENT(P)
31-5:SB_ASSIGN
31-6:TK_NUMBER(1)
31-7:SB_SEMICOLON
32-3:TK_IDENT(Q)
32-5:SB_ASSIGN
32-6:TK_NUMBER(2)
32-7:SB_SEMICOLON
33-3:KW_FOR
33-8:TK_IDENT(N)
33-10:SB_ASSIGN
33-11:TK_NUMBER(2)
33-14:KW_TO
33-18:TK_NUMBER(4)
33-21:KW_DO
34-5:KW_BEGIN
35-7:TK_IDENT(I)
35-9:SB_ASSIGN
35-10:TK_NUMBER(0)
35-11:SB_SEMICOLON
36-7:KW_CALL
36-13:TK_IDENT(HANOI)
36-18:SB_LPAR
36-19:TK_IDENT(N)
36-20:SB_COMMA
36-21:TK_IDENT(P)
36-22:SB_COMMA
36-23:TK_IDENT(Q)
36-25:SB_RPAR
36-25:SB_SEMICOLON
37-7:KW_CALL
37-13:TK_IDENT(WRITELN)
38-5:KW_END
39-1:KW_END
39-4:SB_PERIOD

5. Các lỗi gặp trong error.h

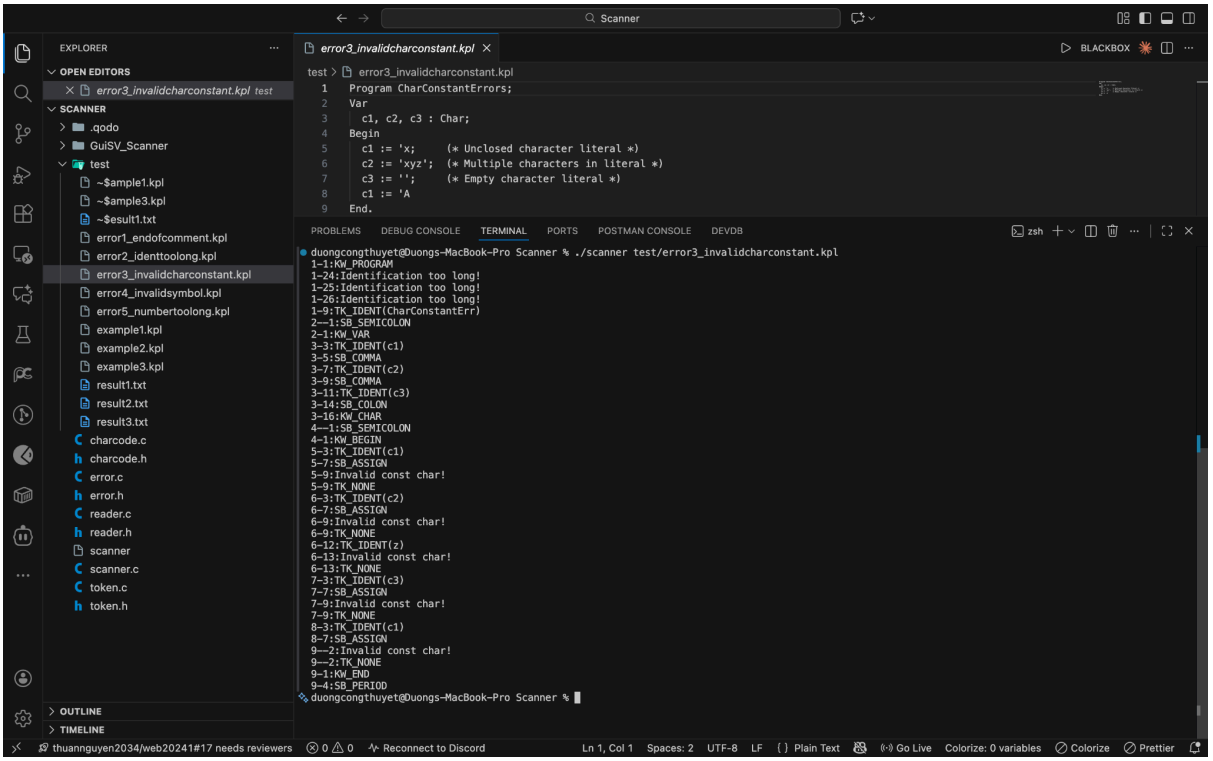
- error1_endofcomment.kpl:



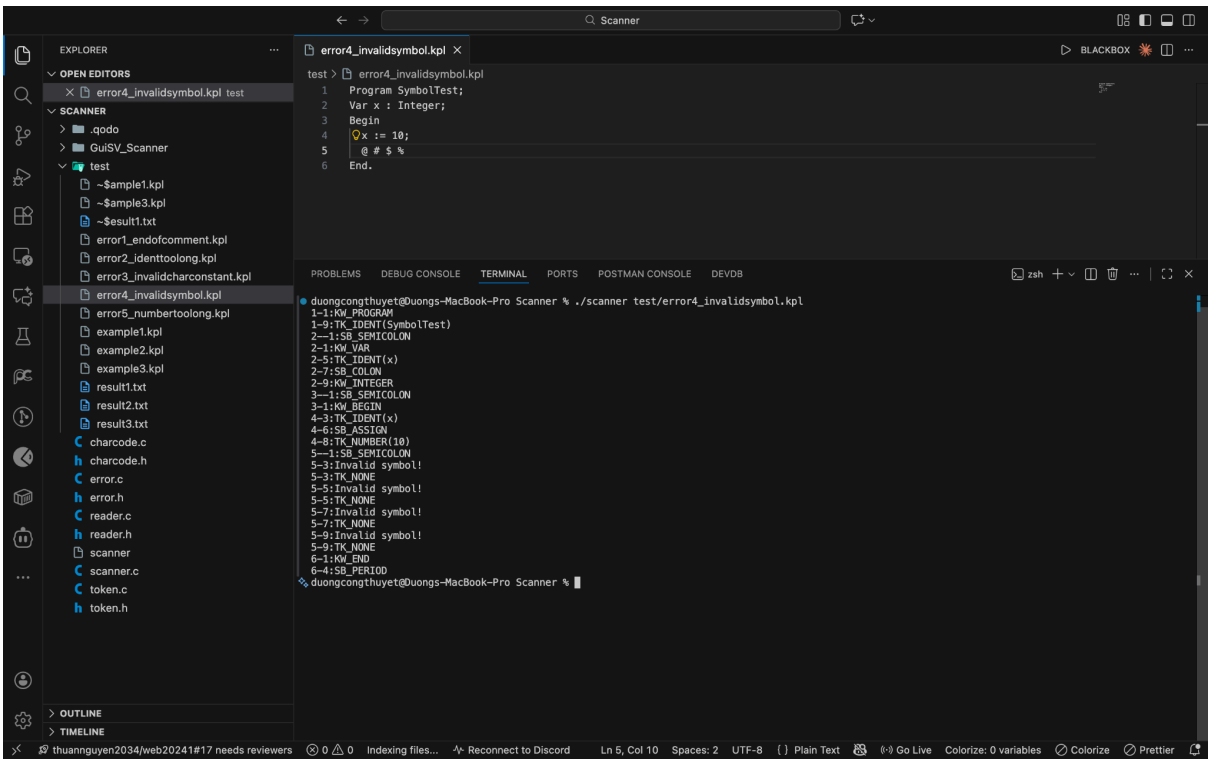
- error2_identtoolong.kpl:



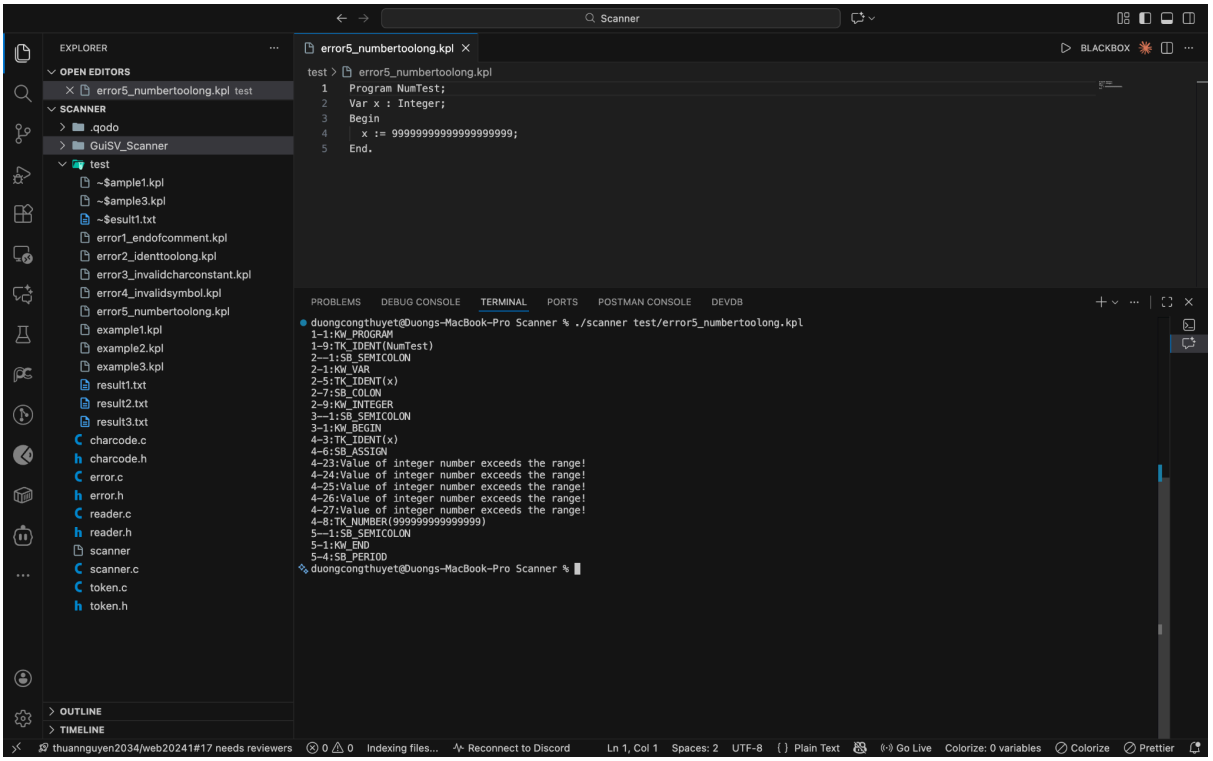
- error3_invalidcharconstant.kpl:



- error4_invalidsymbol.kpl:



- error5_numbertoolong.kpl:


Scanner
EXPLORER
OPEN EDITORS
error5_numbertoolong.kpl test
SCANNER
.qodo
GuiSV_Scanner
test
~$ample1.kpl
~$ample3.kpl
~$esult1.txt
error1_endofcomment.kpl
error2_identtoolong.kpl
error3_invalidcharconstant.kpl
error4_invalidsymbol.kpl
error5_numbertoolong.kpl
example1.kpl
example2.kpl
example3.kpl
result1.txt
result2.txt
result3.txt
charcode.c
charcode.h
error.c
error.h
reader.c
reader.h
scanner
scanner.c
token.c
token.h
OUTLINE
TIMELINE
error5_numbertoolong.kpl
BLACKBOX
test > error5_numbertoolong.kpl
1 Program NumTest;
2 Var x : Integer;
3 Begin
4 x := 99999999999999999999;
5 End.
PROBLEMS
DEBUG CONSOLE
TERMINAL
PORTS
POSTMAN CONSOLE
DEVDB
duongcongthuyet@Duongs-MacBook-Pro Scanner % ./scanner test/error5_numbertoolong.kpl
1–1:KW_PROGRAM
1–9:TK_IDENT(NumTest)
2—1:SB_SEMICOLON
2–1:KW_VAR
2–5:TK_IDENT(x)
2–7:SB_COLON
2–9:KW_INTEGER
3—1:SB_SEMICOLON
3–1:KW_BEGIN
4–3:TK_IDENT(x)
4–6:SB_ASSIGN
4–23:Value of integer number exceeds the range!
4–24:Value of integer number exceeds the range!
4–25:Value of integer number exceeds the range!
4–26:Value of integer number exceeds the range!
4–27:Value of integer number exceeds the range!
4–8:TK_NUMBER(9999999999999999)
5—1:SB_SEMICOLON
5–1:KW_END
5–4:SB_PERIOD
duongcongthuyet@Duongs-MacBook-Pro Scanner %
thuannguyen2034/web20241#17 needs reviewers
0 0
Indexing files...
Reconnect to Discord
Ln 1, Col 1
Spaces: 2
UTF-8
Plain Text
Go Live
Colorize: 0 variables
Colorize
Prettier