

CS 460 – Project 2 - FAQ

Question: When I find an error, I would like to bypass the rest of the tokens on that line. How can I do that without modifying the Lexical Analyzer?

Answer: With the exception of comment lines, PL460 does not specify line breaks and most other spacing.

For example, the program:

```
;; This is a basic "Hello World" program

(define (main)
  (display "Hello World\n")
)

(main)
```

could be written as:

```
;; This is a basic "Hello World" program

(define(main)(display "Hello World\n"))(main)
```

or even as:

```
;; This is a basic "Hello World" program

(
  define
  (
    main
  )
  (
    display
    "Hello World\n"
  )
)

(
  main
)
```

and the results should be the same.

I think that what you are actually looking for is the end of the "statement". Since that may or may not correlate with the end of the line, your error recovery should probably look for something that follows a "statement". This is what was discussed in class on Monday.

Question: What are the characteristics of a good error message?

Answer: It should be accurate and written in language that is grammatically correct and intelligible to a beginning programmer. Here are some examples from your submissions:

1	Error at 3,15: 1unexpected	Grammar errors
2	Error at 3,15: Syntax error: Expected closing parenthesis but found '1'	Inaccurate
3	Error at 3,15: 1 unexpected	Minimal
4	Error at 3,15: ')' expected	Inaccurate
5	Error at 3,16: literal expected	Inaccurate
6	Error at 3,15: 1 unexpected in parameter definitions	Good
7	Error at 3,15: Unexpected :1	Minimal
8	Error at 3,15: Parsing Error: NUMLIT_T at start of <param_list>	Not language that is intelligible to a beginning programmer.
9	Error at 3,15: '1' unexpected	Minimal

Question: In the project 2 test cases where the input files have errors, you mention that the “Error messages may differ.” Does that apply to just the message itself (eg “’) unexpected”) or to the entire error line? Should we be getting the same number of errors and at the same line and position numbers?

Answer: Your line and position numbers should be in the same ballpark - line numbers off by no more than 2, position numbers off by no more than 10.

Depending on how you implemented error recovery, you may find that, based on a domino effect, you have slightly fewer or more errors than what is in the expected listing. That is OK.

What you don't want to do is completely miss an error.

The messages themselves should be similar, grammatically correct and not misleading.

Question: If the program has errors, would there be some slight differences in the output depending on where the error recovery logic is handled? Are you only checking that the rules used is equivalent on valid programs? I'm noticing some *slight* differences between my .p2 output and yours when using some of the P2Tests, but **only** on programs that also have errors.

Answer: Since it is likely that the .p2 files will differ if errors are encountered, the script does not generate diff files for test cases that are known to include errors.

If the Syntactical Analyzer introduces phantom errors, there may be a diff file.

If you are only encountering differences when the file contains an error (*e.pl460), you should be fine.

Question: Question

Answer: Answer