

Can you please complete the statements function:

;;; ~~~ Statements ~~~

```
; stmt -> id = expr;
; | if (boolean) stmt;
; | while (boolean) linelist endwhile;
; | read id;
; | write expr;
; | goto id;
; | gosub id;
; | return;
; | break;
; | end;
(define stmt/p
  (or/p (do [identifier <- id/p]
    (string/p "=")
    [e <- expr/p]
    (string/p ";")
    (pure (list 'assign identifier e)))
    (do (string/p "if")
      (string/p "(")
      [cond <- boolean/p]
      (string/p ")")
      [s <- stmt/p]
      (string/p ";")
      (pure (list 'if cond s)))
    (do (string/p "while")
      (string/p "(")
      [cond <- boolean/p]
      (string/p ")")
      [ll <- linelist/p]
      (string/p "endwhile")
      (pure (list 'while cond ll)))
    ; etc....
  ))
```

Help me debug:

string:1:4: parse error

unexpected:

expected: :, letter, or number

0 | read A ;

Input file:

read A;

write A;

\$\$

A is a valid letter??

Is this correct?

```
(define id/p
```

```
  (do [first-char <- (or/p letter/p (char/p #\_))]
```

```
      [rest-chars <- (many/p (or/p letter/p digit/p))]
```

```
      (pure (string->symbol (list->string (cons first-char rest-chars))))))
```

```
)
```

I think it's because the read parse doesn't account for a whitespace.

```
(define stmt/p
```

```
  (or/p
```

```
    ; id = expr;
```

```
    (do [identifier <- id/p]
```

```
        (string/p "=")
```

```
        [e <- expr/p]
```

```
        (string/p ";"))
```

```
    (pure (list 'assign identifier e))))
```

```
  ; if (boolean) stmt;
```

```
  (do (string/p "if")
```

```
      (string/p "(")
```

```
      [cond <- boolean/p]
```

```
      (string/p ")")
```

```
      [s <- stmt/p]
```

```
      (string/p ";"))
```

```
    (pure (list 'if cond s))))
```

```
  ; while (boolean) linelist endwhile;
```

```
(do (string/p "while")
    (string/p "(")
    [cond <- boolean/p]
    (string/p ")")
    [ll <- linelist/p]
    (string/p "endwhile")
    (pure (list 'while cond ll)))
```

```
; read id;
(do (string/p "read")
    [identifier <- id/p]
    (string/p ";")
    (pure (list 'read identifier)))
```

```
; write expr;
(do (string/p "write")
    [e <- expr/p]
    (string/p ";")
    (pure (list 'write e)))
```

```
; goto id;
(do (string/p "goto")
    [identifier <- id/p]
    (string/p ";")
    (pure (list 'goto identifier)))
```

```
; gosub id;
(do (string/p "gosub")
    [identifier <- id/p]
    (string/p ";")
    (pure (list 'gosub identifier)))
```

```
; return;
(do (string/p "return")
    (string/p ";")
    (pure 'return))
```

```
; break;
(do (string/p "break")
    (string/p ";")
    (pure 'break))
```

```
; end;
(do (string/p "end")
```

```
(string/p ";")
(pure 'end))
))
```

Why do I get this error

Line: Attempting to parse label: #<void>

Line: Attempting to parse stmt: (read A)

Line: Attempting to parse linetail: #<void>

Linelist: Attempting to parse line: ((#<void>) (read A) #<void>)

Line: Attempting to parse label: #<void>

Expr: Attempting to parse identifier: B

Line: Attempting to parse stmt: (write (B #<void>))

Line: Attempting to parse linetail: #<void>

Linelist: Attempting to parse line: ((#<void>) (write (B #<void>)) #<void>)

Line: Attempting to parse label: goto

string:3:6: parse error

unexpected: 5

expected: ' ', break, end, gosub, goto, if, letter, read, return, while, whitespace, or write

```
3 | goto: 5+y;
   ^
```

I just realized the problem was I was trying to use a reserved word as a label

Thank you for helping me. Can you please provide some sample input files

Every file needs to end with \$\$, can you add those in