

## PL/0 Errors

### 1. Period Expected Error:

PL/0 Code-

```
1 var x, y;  
2  
3 begin  
4  
5 x := y + 56;  
6  
7 end
```

Output-

```
C:\Users\led228\PL-0-Compiler>pl0c.exe  
Cleaning input...COMPLETE  
Reading in tokens...COMPLETE  
Generating lex table...COMPLETE  
Generating lex list...COMPLETE  
ERROR CODE 9: Period expected
```

### 2. '=' Expected Error:

PL/0 Code:

```
1 const beginningX 3; /*Syntax error: '=' expected.*/  
2  
3 var facRes, facParam;  
4  
5 procedure Factorial;  
6 var myFacParam;  
7  
8 begin  
9     if facParam > 0 then begin  
10         myFacParam:= facParam;  
11         facParam:= facParam*2/2 -1*1;  
12  
13         call Factorial;  
14  
15         if myFacParam <> facParam +1 then /*This should never be taken*/  
16         begin  
17             facParam:=0;  
18         end;  
19  
20         facRes:= facRes * (facParam+1);  
21         facParam:= myFacParam;  
22     end  
23     else  
24         facRes:= 1;  
25 end;  
26  
27 begin  
28     facParam:= beginningX; /*Just to have done something with a constant as well*/  
29     call Factorial  
30 end.
```

Output-

```
C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 3: Identifier must be followed by =
```

### 3. Type Error:

PL/0 Code-

```
1 procedure A;
2   var a;
3   a:=2;
4
5   begin
6     A:=4;
7   end.
```

Output-

```
C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 12: Assignment to constant or procedure is not allowed
```

### 4. Undeclared Error:

PL/0 Code-

```
1 procedure A;
2   var a;
3   begin
4     a:=4;
5   end;
6 begin
7   a:=4;
8 end.
```

Output-

```
C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 11: Undeclared identifier
```

### 5. Then Expected Error:

PL/0 Code-

---

```

1  var x, w;
2
3  begin
4      x:= 4;
5      read w;
6
7      if w > x
8          w:= w + 1
9      else
10         w:= x;
11
12     write w;
13 end.

```

Output-

```

C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 16: 'then' expected

```

6. ':= ' Missing After Identifier Error:

PL/0 Code-

---

```

1  var x, y;
2
3  begin
4      x = y + 42;
5  end.

```

Output-

```

C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 29: ':=' must follow identifier in statement

```

7. Identifier Expected After Write Error:

PL/0 Code-

---

```

1  var x,y;
2  /* This program computes the absolute value of the input.*/
3  begin
4      read x;
5      if x<0 then
6          y:=0-x
7      else
8          y:=x;
9      write ;
10 end.

```

Output-

```

C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 28: Identifier expected after 'write'

```

#### 8. Identifier Expected After Var Error:

PL/0 Code-

```

1  var x,;
2  /*This program computes the absolute value of an integer using two subroutines */
3
4  procedure Neg;
5      begin
6          y:= 0-x;
7      end;
8  procedure ABS;
9      var a;
10     begin
11         a:=x;
12         if a<0 then
13             call Neg
14         else y:= a;
15     end;
16
17 begin
18     read x;
19     call ABS;
20     write y;
21 end.

```

Output-

```

C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 26: Identifier expected after 'var'

```

#### 9. Right Parenthesis Expected Error:

PL/0 Code-

```

1  const loopEnd=0;
2  var i, n, s;
3  begin
4      read n;
5      s:= n*(n+1/2;
6      write s;
7      s:=0;
8      i:=n;
9      while i> loopEnd do
10     begin
11         s:= s+ i;
12         i:= i-1;
13     end;
14     write s;
15 end.

```

Output-

```

C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 22: Right parenthesis missing

```

10. 'Do' Expected Error:

PL/0 Code-

```

1  /*This program outputs the i_th number in
2  the fibonacci sequence */
3
4  var i, a, aprev, t;
5
6  begin
7      read i;
8      aprev:=0;
9      a:=1;
10     while i>1  /* Simulating a "for" loop */
11     begin
12         t:= a;
13         a:= a+ aprev;
14         aprev:=t;
15         i:= i-1;
16     end;
17     write a;
18 end.

```

Output-

```

C:\Users\led228\PL-0-Compiler>pl0c.exe
Cleaning input...COMPLETE
Reading in tokens...COMPLETE
Generating lex table...COMPLETE
Generating lex list...COMPLETE
ERROR CODE 18: 'do' expected

```

