OURC_Project 2

DESIGN : GAXZIPTGO

Q&A

outline

- About Project 2
  - Error Message
    - undefine identifier
    - Error Line
  - Statement Excute
  - Define Variable
  - Define Function
  - Execute Function
- QA

About Project 2

- Error Message
  - undeclared identifier
    - 規則1 : 在<definition>,
      <function_definition_without_ID> ,
      <formal_parameter_list>,
      <rest_of_declarators>,
      <declaration>文法中的Identifier 不須確認是否定義
    - 規則2 : 該文法若為Identifier開頭 則在下一個token(或換行) 需確認
      若不是開頭 直接確認

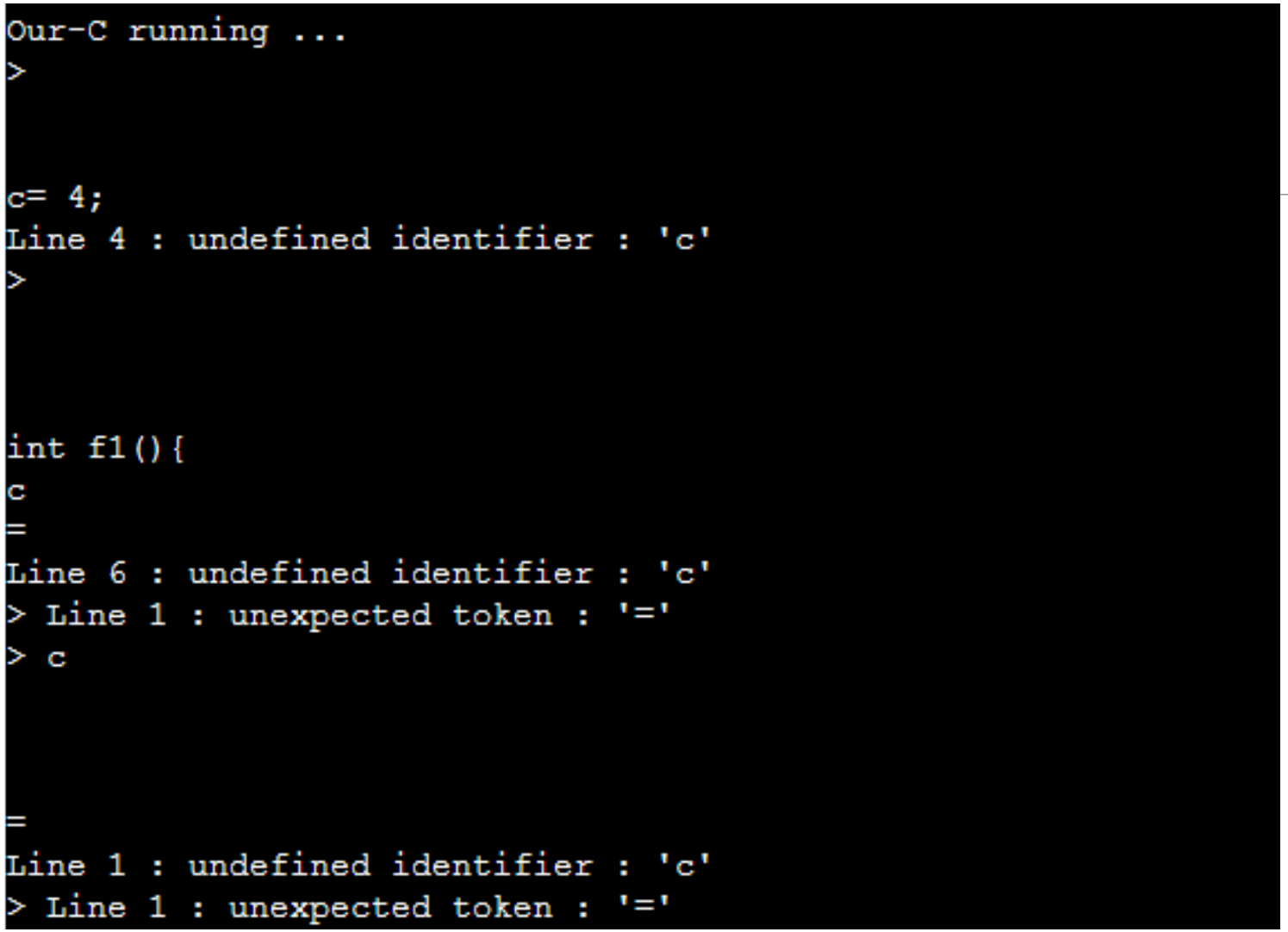
```
Our-C running ...
> int a ;
Definition of a entered ...
> b
=
Line 1 : undefined identifier : 'b'
> Line 1 : unexpected token : '='
> int f1() {
b
=
Line 2 : undefined identifier : 'b'
> Line 1 : unexpected token : '='
> int f1( int b ) {
b = 3 ;
}
Definition of f1() entered ...
```

About Project 2

- Error Message(範例)
  - undeclared identifier

About Project 2

- Error Message
  - Error Line
    - 規則 : 依每一次<definition> or <statement>為主
      每遇到一次換行 Line+1



About Project 2

- Error Message(範例)
  - Error Line

About Project 2

- Statement
- 規則 : 若<statement>完成，則對該input做運算
  (Pro2 只需處理定義的function)
  並印出:Statement executed ...

About Project 2

```
Our-C running ...
> 5 ;
Statement executed ...
> cout << 5 ;
Statement executed ...
> cin >> a ;
Line 1 : undefined identifier : 'a'
> cin >> 5 ;
Statement executed ...
```

- Statement(範例)
  - cout, cin 目前無需實作

About Project 2

- Define Variable
- 規則 : 若<definition>完成，則對所有文法內的identifier做定義
  並印出: Definition of (...) entered ...
  如果已經定義過
  則印出: New definition of (...) entered ...

About Project 2

```
Our-C running ...
> int a ;
Definition of a entered ...
> int b ; int c ;
Definition of b entered ...
> Definition of c entered ...
> int b, c ;
New definition of b entered ...
New definition of c entered ...
```

- Define Variable (範例1)
  - <definition>

```
Our-C running ...
> { int a ; }
Statement executed ...
>
```

About Project 2

- Define Variable (範例2)
  - <statement>

About Project 2

- Define Function
- 規則 : 若<definition>完成，且經過<function_definition_without_ID>，則對所有文法內的identifier做function的定義

  並印出: Definition of (...) entered ...

  如果已經定義過

  則印出: New definition of (...) entered ...

  <compound_statement> 與 <formal_parameter_list>

  內的identifier 無須印出

About Project 2

```
Our-C running ...
> int f1() {}
Definition of f1() entered ...
> int f1() {
   int a ;
}
New definition of f1() entered ...
```

- Define Function (範例1)

About Project 2

- Execute Function
  - ListAllVariables(); // 列出所有變數 並依字串大小排列
  - ListAllFunctions(); // 列出所有函式 並依字串大小排列
  - ListVariable(char[] var) ; // 列出該變數以及型別
  - ListFunction(char[] fun) ; // 列出該函式與定義的程式

```
Our-C running ...
> int a ;
Definition of a entered ...
> int f1(int b) {
int c ;
return c ;
}
Definition of f1() entered ...
> int b ;
Definition of b entered ...
> int f2() {} ;
Definition of f2() entered ...
> Statement executed ...
> ListAllVariables() ;
a
b
Statement executed ...
> ListAllFunctions() ;
f1()
f2()
Statement executed ...
```

About Project 2

- Execute Function (範例1)
- ListAllVariables() & ListAllFunctions()

```
> ListVariable("a");
int a ;
Statement executed ...
> ListFunction("f1") ;
int f1( int b ) {
   int c ;
   return c ;
}
Statement executed ...
> ListFUnction("f2") ;
Line 1 : undefined ident
> ListFunction("f2") ;
int f2() {
}
Statement executed ...
```

About Project 2

- Execute Function (範例2)
- ListVariable & ListFunction

About Project 2

```
> int f2() { int b ; if(b==0);}
New definition of f2() entered ...
> ListFUnction("f2");
Line 1 : undefined identifier : 'L
> ListFunction("f2");
int f2() {
   int b ;
   if ( b == 0 )
      ;
}
Statement executed ...
```

- Execute Function (範例3)
  - 印出的Function須符合”夏式文法”