

```
int x = 10; # 常數定義法, 這是註解

flo y = 10.1 + int2flo(x) / 3.0; # 浮點數

str name = "John"; # 字串, 預設用utf-8

bool c = True; # 布林值, 或是 False
```

```
...
這是多行註解
```

函數上面的多行註解會轉成 docString, 先用 markdown 做子語言吧;

```
底下為列表
...
```

```
List(int) a_list = [1, 2, 3, 4, 5];

Array(int) a_array = array!([1, 2, 3, 4, 5]);
```

# 以下是 doc string 的範例:

```
...
Descr : find the sqrt sum of x and y
Arguments :
- x : lhs value
- y : rhs value
Example:
  sqrtsum(3, 4) == 25; # True
...

fn sqrtSum = int x, int y -> int :
  int z = x ** 2 + y ** 2;
  return z;

fn isJohn = str s -> bool :
  return case {
    #print! 是巨集。!結尾是巨集名稱。 ++ 是字串相加
    s == john -> {print!("Hi, " ++ s ++ "!\n");
                  True;}
    else -> False;
  };
```

```
#不返回值(void)的時候也要標註 return;
fn printCat = void -> void :
  print!("cat!");
  return ;
```

```
# 多型:
# @{} vars of Type with constraints
fn map = @(A, B in {x | contains(x.attrs, "Any")}) # or @(A, B in Any)
  (List A) origList; ( A -> B ) aFunction -> (List B) :
  return match origList{
```

```
    [] -> origList;
    [x:xs] -> cons(aFunction(origList),
                  map(origList[1:], aFunction));
};
```

# 定義自定型別：

```
type Person = Person(str name, int age);
type TrafficLight = Red | Yellow | Green;
type List = @{A in Any} Nil | Cons a (List A);
```

```
Person peter = Person{"Peter", 17};
```

```
debug!(peter);
```