

C语言程序应用举例 PDF转换可能丢失图片或格式，建议阅读原文

https://www.100test.com/kao_ti2020/136/2021_2022_C_E8_AF_AD_E8_A8_80_E7_A8_8B_c97_136203.htm 这是一个递归函数调用的例子。程序中函数forward_and_backwards()的功能是显示一个字符串后反向显示该字符串。[例4-17] 计算1~7的平方及平方和。

```
#include #include void header(); /*函数声明*/ void square(int number); void ending(); int sum; /*全局变量*/ main(){int index; header(); /*函数调用*/ for(index = 1; index square(index); ending(); /*结束*/ } void header(){sum = 0; /*初始化变量"sum"*/ printf("This is the header for the square program\n ; \n"); } void square(int number){int numsq; numsq = number * number; rsum = numsq; printf("The square of %d is %d\n", number, numsq); } void ending(){printf("\n The sum of the squares is %d , \n", rsum); }
```

运行程序：RUN ? This is the header for the square program
The square of 1 is 1
The square of 2 is 4
The square of 3 is 9
The square of 4 is 16
The square of 5 is 25
The square of 6 is 36
The square of 7 is 49
The sum of the squares is 140

这个程序打印出1到7的平方值，最后打印出1到7的平方值的和，其中全局变量sum在多个函数中出现过。全局变量在header中被初始化为零；在函数square中，sum对number的平方值进行累加，也就是说，每调用一次函数square和sum就对number的平方值累加一次；全局变量sum在函数ending中被打印。

100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com