Bahan Ajar

Chapter 9

Materi Pembelajaran

Matakuliah :

PEMROGRAMAN TERSTRUKTUR

Kode Matakuliah : SKO 21411

Prodi : SISTEM KOMPUTER

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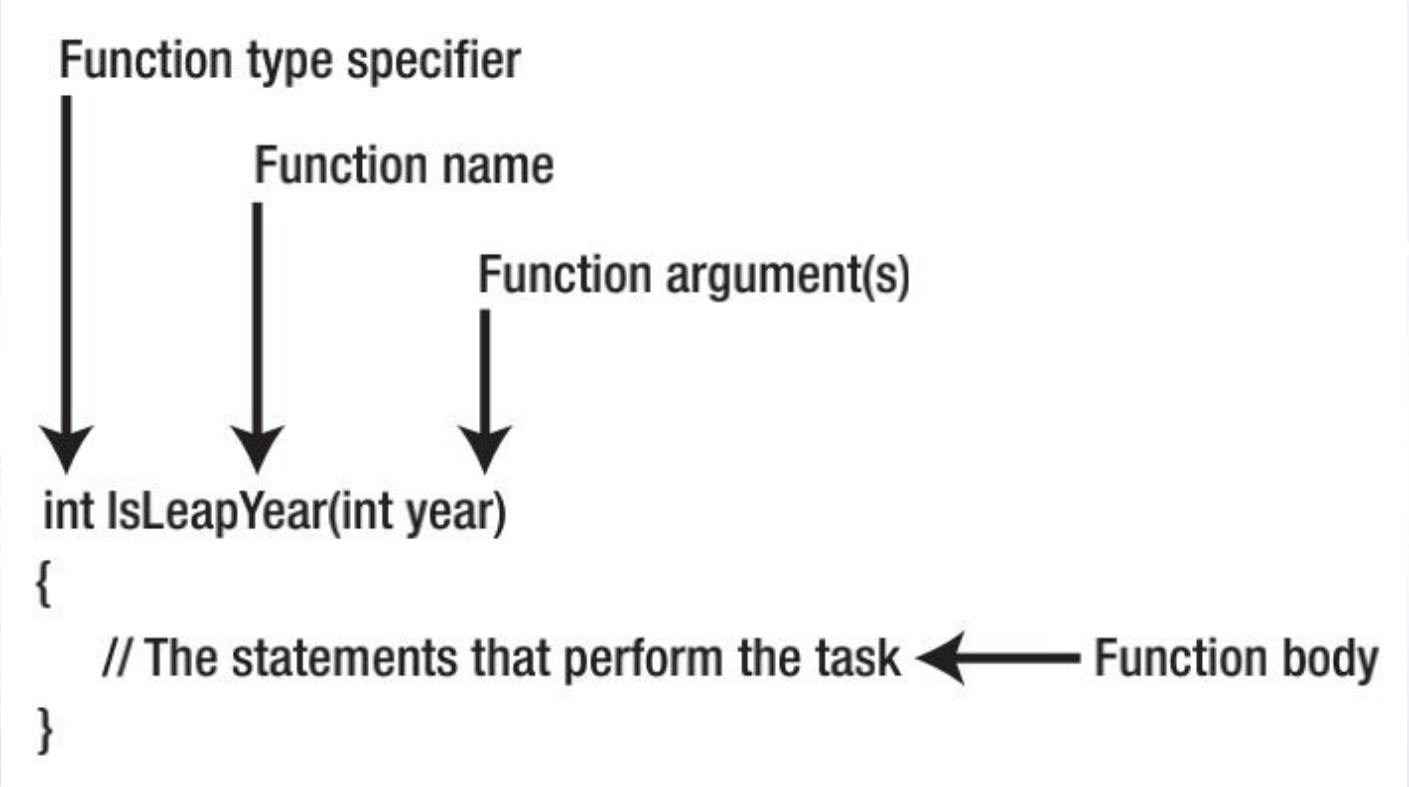
The Anatomy of a Function

The general structure of a C function as shown



Function Type Specifier

```
int FindListItem(int list[], int target)
{
ShellSort(list); // Sort the data
return FindItem(list, target); // Find the item
}
```

In this case, you have wrapped the details of how the sort is done in a function that says what is to be done. If you decide later that some other algorithm works better, then it is very easy to make the change.

Function Arguments

```
int buyNails;
int nailsPerFoot;
int numberOfFeet;
// some more code...
buyNails = NailsNeeded(nailsPerFoot,
numberOfFeet);
```

Function Body

If the function type specifier is anything other than void, then at least one of the statements in the function body must contain the keyword return. For example:

```
int VolumeOfCube(int width, int length, int height)
{
 int volume;
 volume = width * length * height;
 return volume;
}
```

Function **Signature**

Sometimes you may hear the term function signature when discussing functions. A function signature is comprised of everything following the type specifier through the closing parenthesis of the argument list. For example, for the VolumeOfCube() function, the function signature is:

VolumeOfCube(int width, int length, int height)

Functions Should Avoid Coupling

Coupling refers to the need for one function to depend on the results of another function to perform its task. For example, earlier we mentioned a function named FindListItem() and suggested:

```
int FindListItem(int list[], int target)
{
ShellSort(list); // Sort the data
return FindItem(list, target); // Find the item
}
```

This is really not a good function because it has two tasks:
1. Sorting the data
2. Finding the item in the sorted list

Argument List

After you write this function, handing the function to another programmer for use of your function should prompt only three questions from them:

1. What task does this function perform?
2. What data do I need to send to the function?
3. What data do I get back from it?

Tugas Mandiri (teori):

Jelaskan bebrapa fungsi (FUNCTION) dalam pemrograman C Arduino?. berikan contohnya.

Tugas Mandiri (prakt):

Lakukan perakitan skema rangkaian LED di proteus untuk sketch FUNCTION dalam bahasa C Arduino.

end