



SNS COLLEGE OF TECHNOLOGY



Coimbatore-36.

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COURSE NAME : 23ITT101 PROGRAMMING IN C AND DATA STRUCTURES
I YEAR/ II SEMESTER

UNIT – II FUNCTIONS
FUNCTIONS-USER DEFINE FUNCTIONS

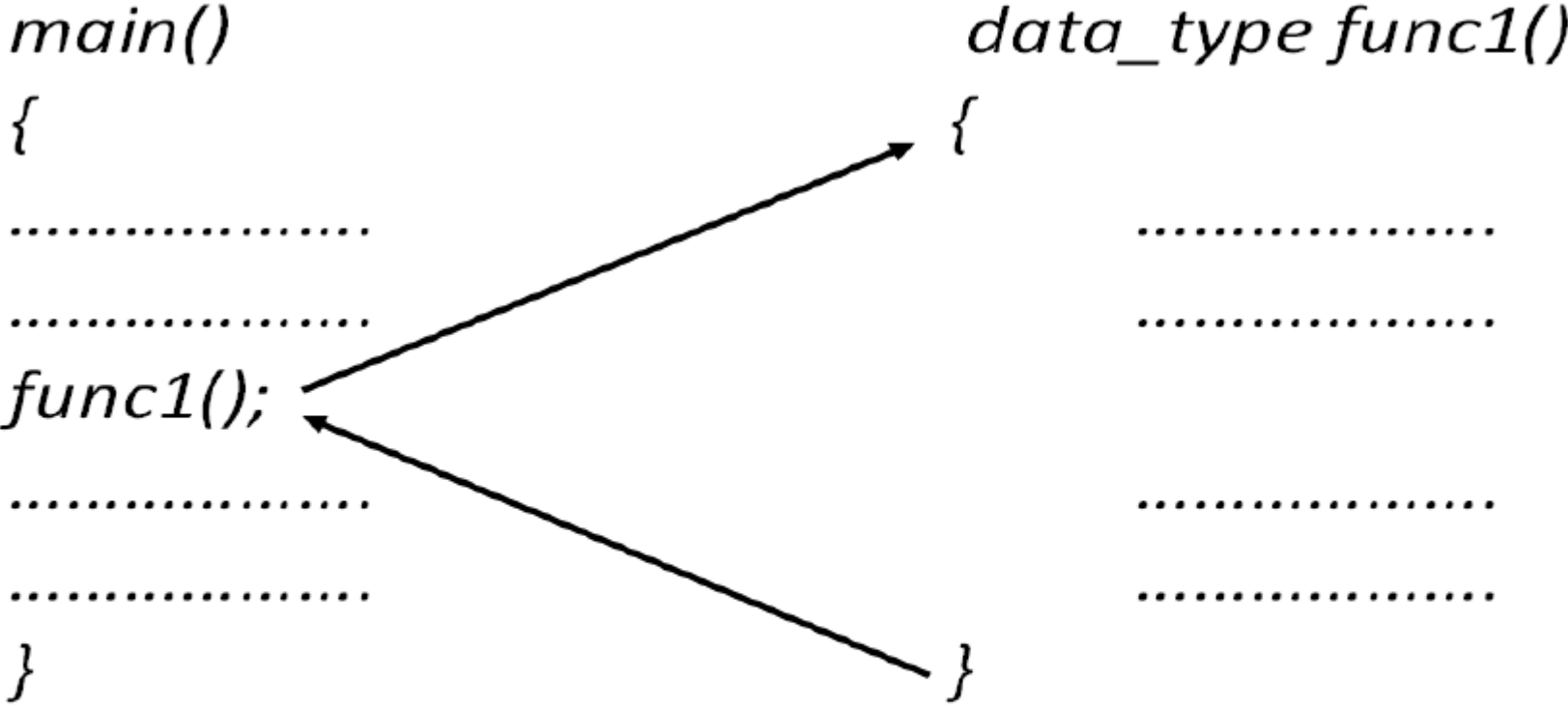
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USER DEFINED FUNCTIONS



Calling function

Called function



Functions

How function works in C programming?

```
#include <stdio.h>

void functionName()
{
    ... ..
    ... ..
}

int main()
{
    ... ..
    ... ..
    functionName();
}

... ..
... ..
```

Note, function names are identifiers and should be unique.



```
int add(int, int);

int main()
{
    int m = 20, n = 30, sum;
    sum = add(m, n);
    printf("sum is %d", sum);
}

int add(int a, int b)
{
    return ( a + b );
}
```

This is the way you call a function.

NOTE: while calling a function, you should not mention the return type of the function

Also you should not mention the data types of the arguments

This is the way how you define a function.

NOTE: it is important to mention both data type and name of parameters

```
int add(int, int);

int main()
{
    int m = 20, n = 30, sum;
    sum = 50;
    printf("sum is %d", 50 );
}

int add(int a, int b)
{
    return ( 50 );
}
```

a	b
20	30



Parameter is a variable in the declaration and definition of the Function

Argument is the actual value of the parameter that gets passed to the function

Note :Parameter is also called as Formal Parameter and Argument is also called as Actual Parameter

```
int add(int, int);

int main()
{
    int m = 20, n = 30, sum;
    sum = add(m, n);
    printf("sum is %d", sum);
}

int add(int a, int b)
{
    return (a + b);
}
```

Arguments or Actual Parameters

Parameters or Formal Parameters

- The type of arguments passed to a function and the formal parameters must match, otherwise, the compiler will throw an error.
- A function can also be called without passing an argument.



Actual Parameters: The parameters passed to a function.

Formal Parameters: The parameters received by a function.

```
add(m, n);
```

Actual
Parameters

```
int add(int a, int b)  
{  
    return (a+b);  
}
```

Formal
Parameters



```
1  #include <stdio.h>
2
3  int areaOfRect(int length, int breadth)
4  {
5      int area;
6      area = length * breadth;
7      return area;
8  }
9  int main()
10 {
11     int l=10, b=5;
12     int area = areaOfRect(l, b);
13     printf("%d\n", area);
14
15 }
16
```

