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

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Function is basically a set of statements that takes inputs, perform some computation and produces output

```
Return_type function_name(set_of_inputs);


            Inputs provided to the function
```

Why we are using Functions →

```
1. Reusability

Once the function is defined, it can be reused over and over
again.


2. Abstraction

If you are just using the function in your program then you
don't have to worry about how it works inside!

Example: scanf function
```

Function Declaration

When we declare variable we declare its properties to the compiler

Function Declaration (also called function prototype)means declaring the properties of a function

```
For example:        int  var;
Properties:
  1.  Name of variable:      var
  2.  Type of variable:      int
```

```
For example:        int  fun(int, char);

Properties:
  1.  Name of function :        fun
  2.  Return Type of function:  int
  3.  Number of parameters:     2
  4.  Type of parameter 1:      int
  5.  Type of parameter 2:      char
```

```c
1    #include <stdio.h>
2    char fun();  //function prototype
3    int main()
4    {
5        char c = fun();
6        printf("character is: %c", c);
7    }
8
9    char fun()
10   {
11       return 'a';
12   }
13
```

```
"C:\Users\jaspr\Desktop\Neso Academy Files\My Cool Prog
character is: a
Process returned 0 (0x0)   execution time : 0.1
Press any key to continue.
```

Function definition

Function definition contains the block of code to perform a specific task. In our example, adding two numbers and returning it.

Syntax of function definition

```
returnType functionName(type1 argument1, type2 argument2, ...)
{
    //body of the function
}
```
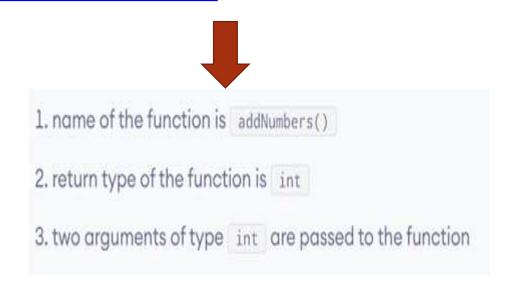
When a function is called, the control of the program is transferred to the function definition.

And, the compiler starts executing the codes inside the body of a function.

int addNumbers (int a, int b);

1. name of the function is `addNumbers()`

2. return type of the function is `int`

3. two arguments of type `int` are passed to the function

Types of function

There are two types of function in C programming:

- Standard library functions

- User-defined functions