C Functions :-

A function is a block of code which only runs when it is called.

You can pass data, known as parameters, into a function.

Functions are used to perform certain actions, and they are important for reusing code: Define the code once, and use it many times.

Predefined Functions

So it turns out you already know what a function is. You have been using it the whole time while studying this tutorial!

For example, `main()` is a function, which is used to execute code, and `printf()` is a function; used to output/print text to the screen:

Example

```
int main() {
  printf("Hello World!");
  return 0;
}
```

Create a Function

To create (often referred to as *declare*) your own function, specify the name of the function, followed by parentheses `()` and curly brackets `{}`:

Syntax

```
void myFunction() {
  // code to be executed
}
```

Example Explained

- `myFunction()` is the name of the function
- `void` means that the function does not have a return value. You will learn more about return values later in the next chapter
- Inside the function (the body), add code that defines what the function should do

Call a Function

Declared functions are not executed immediately. They are "saved for later use", and will be executed when they are called.

To call a function, write the function's name followed by two parentheses `()` and a semicolon `;`

In the following example, `myFunction()` is used to print a text (the action), when it is called:

Example

Inside `main`, call `myFunction()`:

```
// Create a function
void myFunction() {
  printf("I just got executed!");
}

int main() {
  myFunction(); // call the function
  return 0;
}

// Outputs "I just got executed!"
```

A function can be called multiple times:

Example

```
void myFunction() {
  printf("I just got executed!");
```

```
}

int main() {
  myFunction();
  myFunction();
  myFunction();
  return 0;
}

// I just got executed!
// I just got executed!
// I just got executed!
```