Creation

The "C" Programming language was invented in 1972 by Dennis Ritchie and Ken Thompson, who were working at Bell laboratories together. C began as a more concise version of the BCPL language originally called "B". B was rather slow though and eventually evolved into the C we know and love today. The first somewhat standardised version of C was released with the publication of "The C Programming Language" by Brian Kernighan and Dennis Ritchie. This was nicknamed "K&R C" and became the de facto standard for C compilers although it wasn't a formal standard. The first actual standards regarding C didn't arise until 1989 and 1990 when both ANSI and ISO released their specifications for C.

NOTE	Many programmers still limited themselves to the K&R version of C as it had been in use for longer and was more universally supported.

A couple of the most popular compilers used nowadays are:

GCC One of the older compilers, this is also capable of compiling for other languages like C++ and Go.

Clang This compiler is built on the LLVM Virtual Machine meaning it can run on many systems and while Clang itself only compiles C, C++, and Objective-C, The LLVM has many high-quality compilers for many other languages.

Introduction

Basic Structure

To begin with, nearly every C program needs the line

```
#include <stdio.h>
```

This simply tells the compiler to use the standard input and output functions defined in the "stdio.h" header. This is what handles all communication between the User and the console.

After that, you must define the "main" function. This is where all your code is going to go that should be run when the program is run. The main function can be defined like so:

```
int main(void) {

}
```

The "int" tells the run-time environment that this function will give an integer number when it is finished. Then comes the name of the function. In this case "main". Finally the "void" in parentheses lets the run-time environment know, that no arguments must be passed into main. finally, everything between the curly braces will be executed when the compiled program is run.

Hello world

For our program to output "Hello, world", we write:

```
int main(void) {
    printf("Hello, world!");
}
```

When compiled you should be able to run it and get the following result:

```
Hello, world!
```

The "printf" function is one of the output functions defined by stdio.h. This is the "Print Formatted" function which takes at least one string of characters as an argument and outputs it to the console. Congratulations, you have written your first C program.