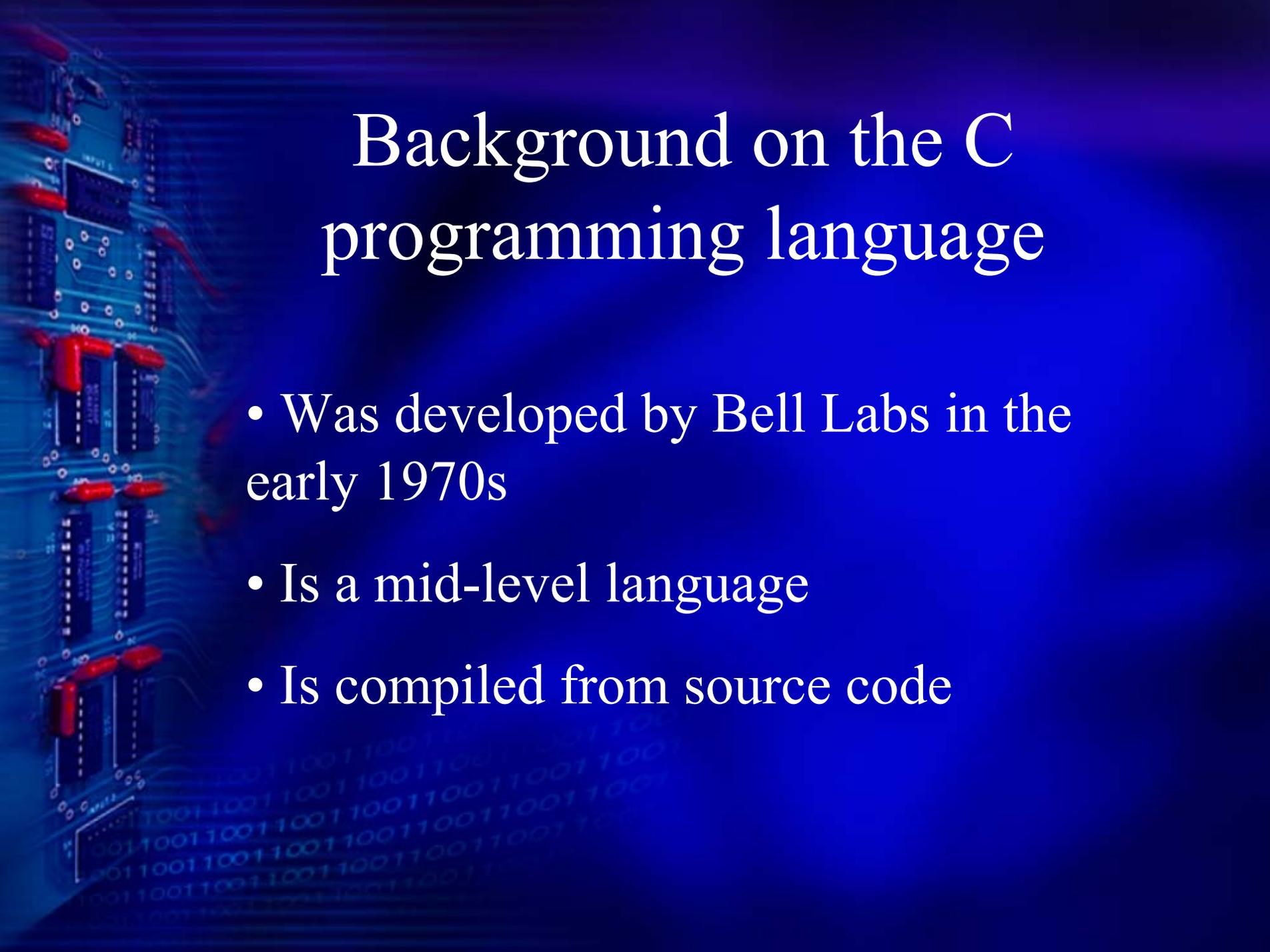
The background of the slide is a blue-tinted image of a computer circuit board. The board is populated with various electronic components, including integrated circuits, capacitors, and resistors. The components are arranged in a grid-like pattern, with some labeled 'INPUT 5'. The overall aesthetic is technical and digital. At the bottom of the image, there is a pattern of binary code (0s and 1s) overlaid on the circuit board, suggesting a connection between hardware and software.

Intro to C Programming

Michael Juhasz



Background on the C programming language

- Was developed by Bell Labs in the early 1970s
- Is a mid-level language
- Is compiled from source code

Creating the source code file

- Create the file program.c
- Open the file in a text editor in order to write the program

```
VIM - Vi IMproved
      version 5.8
      by Bram Moolenaar et al.

      Vim is freely distributable
type  :help uganda<Enter>      if you like vim
type  :q<Enter>                 to exit
type  :help<Enter> or <F1>     for on-line help
type  :help version5<Enter>   for version info
```

The Compiler

- The compiler takes the source code and translates it so the computer can understand it
- After compiling the source code, an executable file is created

```
$ gcc program.c  
\\[\033]0; \w\007  
\\033[32m\\]\u@\h \[\033[33m\w\033[0m\  
$ ls -a  
. .. .bash_history .swp a.exe program.c
```

- Unless you specify a name for the .exe file, the default is a.exe

The Code

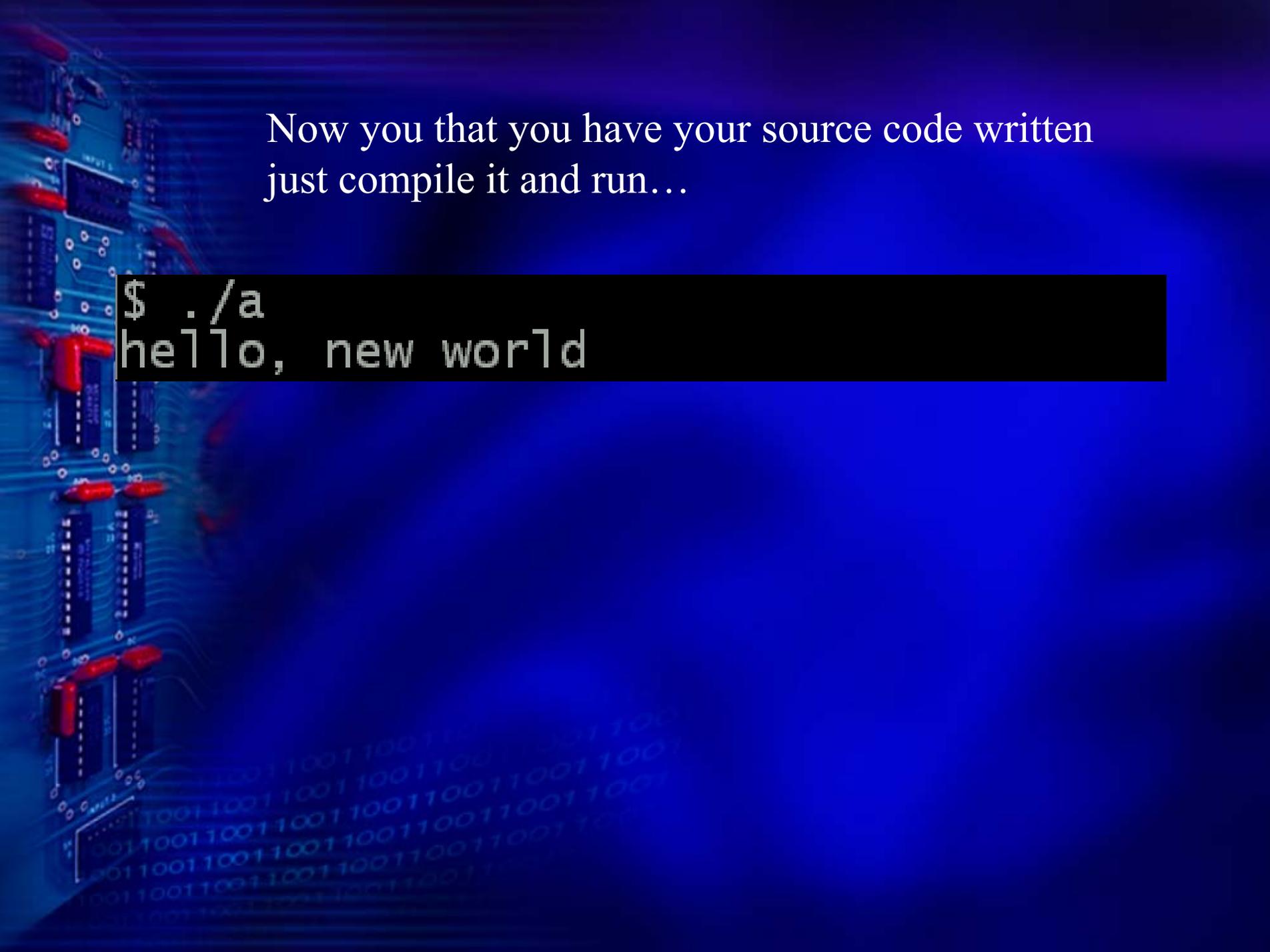
- The C code you write is called the Syntax
- Syntax is a mixture of keywords, constants and variables, and operators
- Keep in mind that C is case sensitive

keywords	Int, for, return
Constants and variables	X, 17
operators	+ (addition), & (the operator's address)

The Traditional First Program

```
#include <stdio.h>

main()
{
    printf("hello, world\n");
}
~
~
~
```



Now you that you have your source code written
just compile it and run...

```
$ ./a  
hello, new world
```