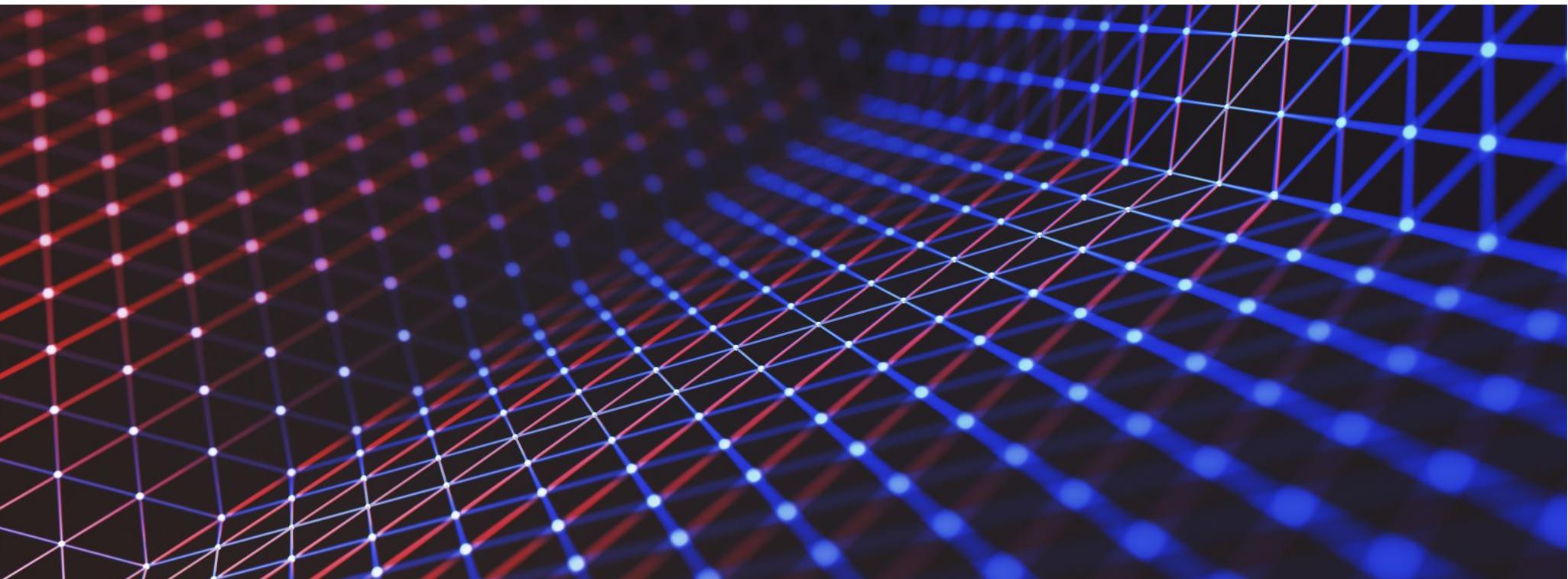
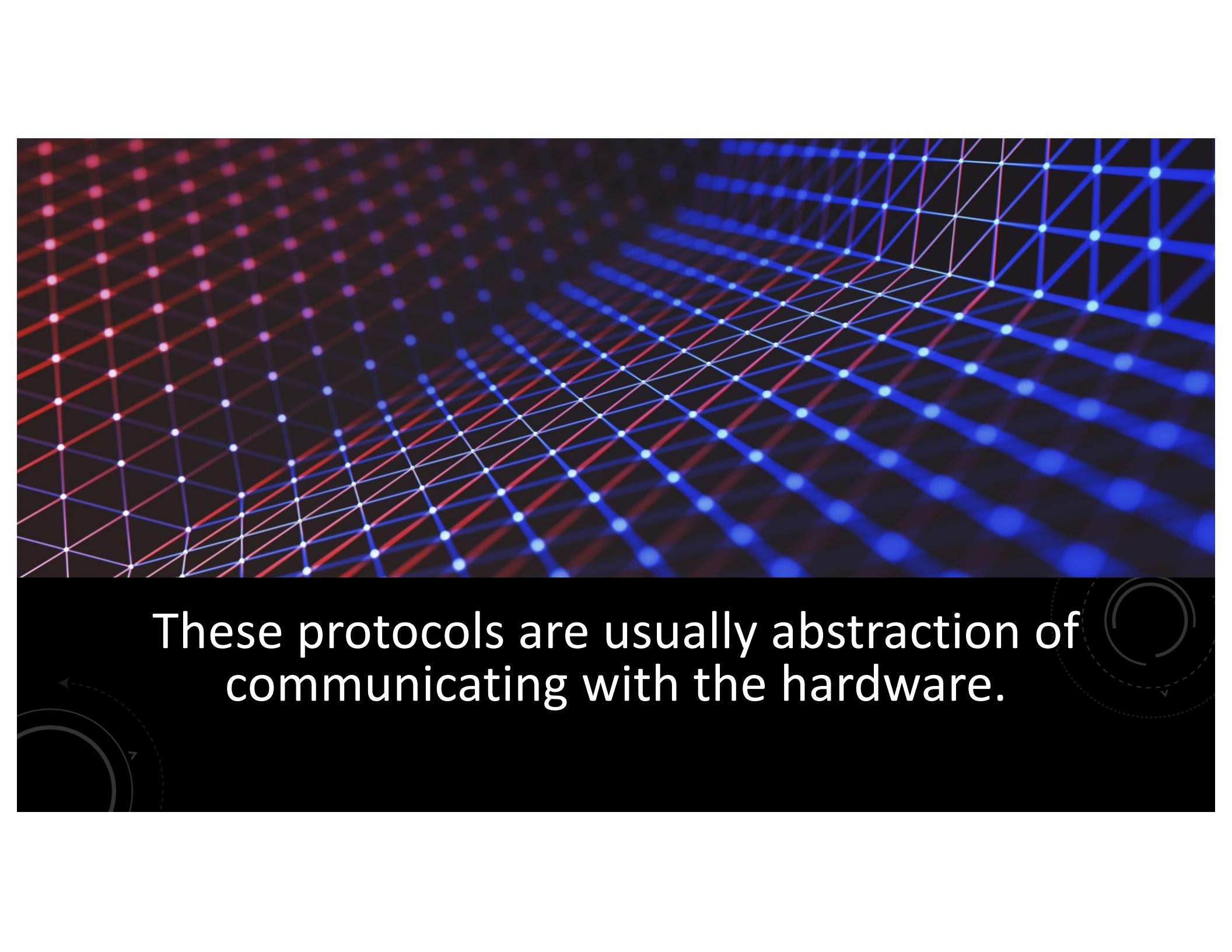


The background of the image is a vibrant blue color with a subtle, organic texture. It features several bright, white light rays emanating from the top right corner, creating a sense of depth and motion. The overall effect is reminiscent of a digital landscape or a futuristic interface.

COMPUTER SCIENCE



Computer Science is a set of protocols used for
communicating with computer



These protocols are usually abstraction of communicating with the hardware.

GETTING YOUR CODE TO RUN



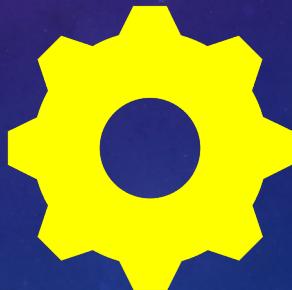
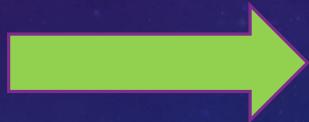
Programmers Write
Source Code Readable
By Programmers



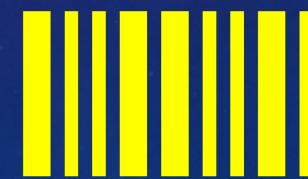
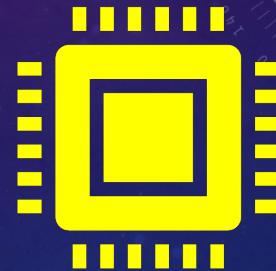
GETTING YOUR CODE TO RUN



Programmers Write
Source Code Readable
By Programmers



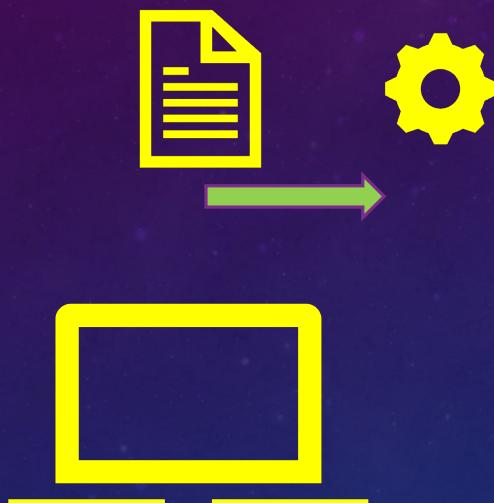
Conversion Process
From One Language
to another



Machine Code
001100100101

SOURCE CODE TO MACHINE CODE

Hello World



0100001001
1000100010
1111100000
0000000100
0010001000
1000000001

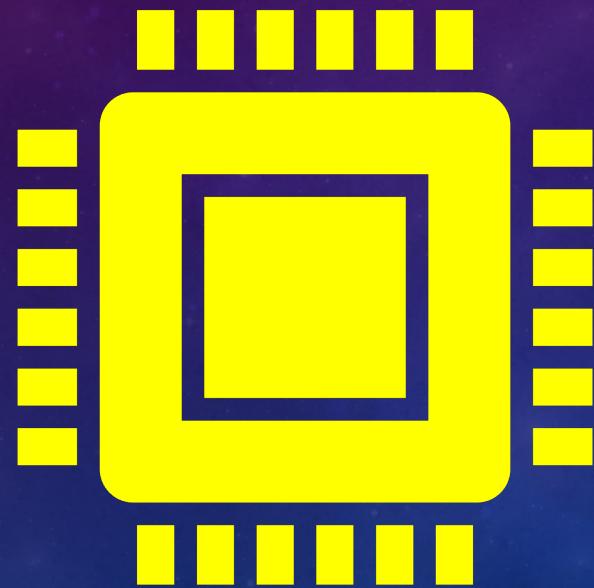
Executable File



Developer

End User

CENTRAL PROCESSING UNIT

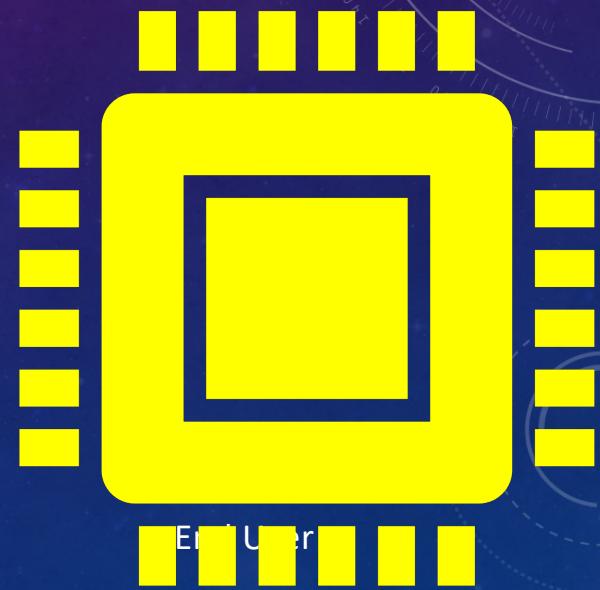


End User

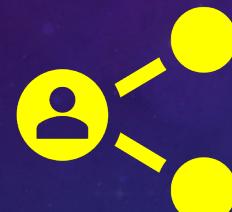
BINARY THE LANGUAGE OF CPU



0
1



SWITCH= TWO STATES



COMBINED SWITCH 2^N

0
1

1
0

1
0

0
1

$$2^2 = 2 \times 2 = 4$$

COMBINED SWITCH $2^4 = 16$ COMBINATIONS

0	0	0	0
1	1	1	1

0	0	0	1
1	1	1	1

0	0	1	0
1	1	0	1

0	0	1	1
1	1	0	0

0	1	0	0
1	0	1	1

0	1	1	0
1	0	0	1

0	1	1	1
1	0	0	0

1	0	0	0
0	1	1	0

BINARY SYSTEM

0 0 0 0 0 0 0 0



0

BINARY SYSTEM

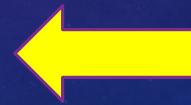
0 0 0 0 0 0 0 1



1

BINARY SYSTEM

0 0 0 0 0 0 1 0



2

BINARY SYSTEM



BINARY SYSTEM

0 0 0 0 1 0 0 0



8

BINARY SYSTEM



BYTE

Bit

BINARY SYSTEM

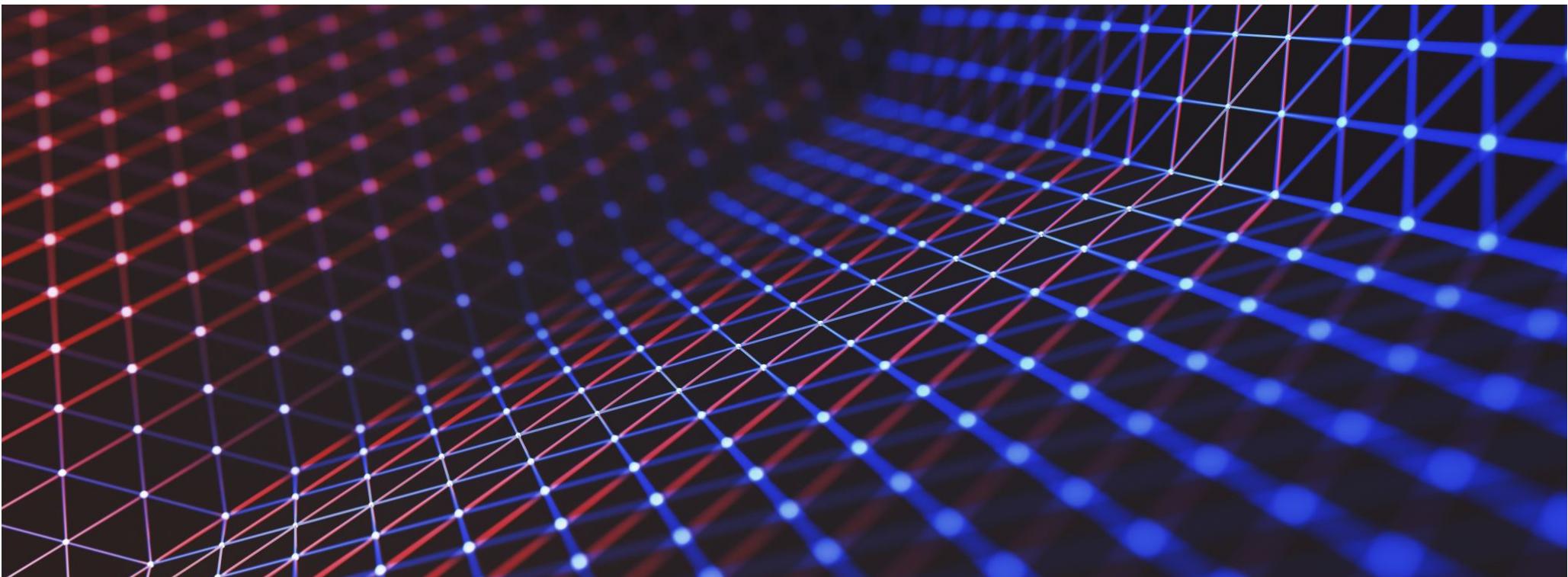


8 BITS = $2^8 = 256$ possible combinations

16 BITS = $2^{16} = 65,000$ possible combinations

32 BITS = $2^{32} + 4$ Billion possible combinations

64 BITS $2^{64} = 18446744073709551616$



The entire point of programming language is that we do not have to write machine level code.