

Review

<1 min

Great work! Over the course of the last few exercises, you learned the fundamentals of

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[binary](#)

numbers:

- Binary, is a numbering system of base 2
- Binary numbers are represented with the digits 0 and 1. This can be expressed as:
 - 0 / 1
 - off / on
 - true / false
 - or a variety of other binary terms
- Each binary digit is called a 'bit'
- Binary numbers can be converted to and from other numbering systems such as decimal.
- Binary numbers can be added, subtracted, multiplied, and divided in much the same way as decimal numbers
- The left-most digit in a binary number is called the Most Significant Bit (MSB) and the right-most is the Least Significant Digit (LSB)

Binary data is the last stop your code goes through before entering into the

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[computer hardware](#)

for processes and return.

When you write a program in Python, it gets translated by a compiler into a lower-level language, typically Assembly. From there it gets further refined into

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[machine code](#)

and then sent to the computer hardware for processing.

In an upcoming lesson, we will discuss how the binary data is actually used by individual components of the computer hardware as well as how the entire architecture of a computer hinges on exactly how we write our binary data.

Instructions

Are there any places where using binary numbers actually makes the math easier?

If you were to design the ideal numbering system to replace the decimal system, what would it be?

