

All data is stored and processed in binary format. Therefore, it is important to know the basics of binary.

The table below is from: <http://www.wirebiters.com/binary-hexadecimal-number-systems/>

| Decimal | Binary | Hexadecimal |
|---------|---------|-------------|
| 0 | 0000000 | 00 |
| 1 | 0000001 | 01 |
| 2 | 0000010 | 02 |
| 3 | 0000011 | 03 |
| 4 | 0000100 | 04 |
| 5 | 0000101 | 05 |
| 6 | 0000110 | 06 |
| 7 | 0000111 | 07 |
| 8 | 0001000 | 08 |
| 9 | 0001001 | 09 |
| 10 | 0001010 | 0A |
| 11 | 0001011 | 0B |
| 12 | 0001100 | 0C |
| 13 | 0001101 | 0D |
| 14 | 0001110 | 0E |
| 15 | 0001111 | 0F |
| 16 | 0010000 | 10 |

The table below is based on:

<https://www.dummies.com/programming/cpp/the-size-of-c-variables/>

Range of Numeric Types

| Type | Size [bytes] | Accuracy | |
|------|--------------|----------|---|
| char | 1 | exact | C |

| | | | |
|---------------|----|-----------|--------|
| short int | 2 | exact | - |
| int | 4 | exact | - |
| long int | 4 | exact | - |
| long long int | 8 | exact | - 9 |
| float | 4 | 7 digits | + |
| double | 8 | 16 digits | + |
| long double | 12 | 19 digits | + |