https://www.youtube.com/watch?v=tfKe8PPI2zs

https://www.youtube.com/watch?v=1GSjbWt0c9M&t=56s

https://www.youtube.com/watch?v=USCBCmwMCDA

https://www.youtube.com/watch?v=M41M9ATm49M

ASCII Computer Code Computers work in binary code. Information is coded using 0s and 1s. Each 0 or 1 is called a bit. In the early years of computer development, different computer companies applied the binary system in their own way. The code for the letters in the word “cat” was often different in different brands of computers. Eventually, a set of standards was developed. Computer manufacturers agreed to use one code called the ASCII (American Standard Code for Information Interchange). ASCII is an 8-bit code. That is, it uses eight bits to represent a letter or a punctuation mark. Eight bits are called a byte. A binary code with eight digits, such as 1101 10112, can be stored in one byte of computer memory. The word "CAT" in a word processor becomes 0100 00112, 0100 00012, and 0101 01002. The word "cat" is 0110 00112, 0110 00012, and 0111 01002. Each letter, number, and symbol is represented by an 8-bit ASCII code. Part of the ASCII code is given in this handout. Notice that there is even an ASCII code for a blank space.

| | |
|---|---|
| C | 01**0**0 0011 |
| A | 01**0**0 0001 |
| T | 01**0**1 0100 |
| | |
| c | 01**1**0 0011 |
| a | 01**1**0 0001 |
| t | 01**1**1 0100 |

The only thing that is different between CAT and cat is the third digit from the right. If it is a 0 then it is capitalized, if it is a 1 then it is lower case.

Use the chart below to spell your name. Use capitals

| Character | Decimal Number | Binary Number | Character | Decimal Number | Binary Number |
|---|---|---|---|---|---|
| blank space | 32 | | ^ | 94 | |
| ! | 33 | | - | 95 | |
| “ | 34 | | ` | 96 | |
| # | 35 | | a | 97 | |
| $ | 36 | | b | 98 | |
| A | 65 | | c | 99 | |
| B | 66 | | d | 100 | |
| C | 67 | | e | 101 | |
| D | 68 | | f | 102 | |
| E | 69 | | g | 103 | |
| F | 70 | | h | 104 | |
| G | 71 | | i | 105 | |
| H | 72 | | j | 106 | |
| I | 73 | | k | 107 | |
| J | 74 | | l | 108 | |
| K | 75 | | m | 109 | |
| L | 76 | | n | 110 | |
| M | 77 | | o | 111 | |
| N | 78 | | p | 112 | |
| O | 79 | | q | 113 | |
| P | 80 | | r | 114 | |
| Q | 81 | | s | 115 | |
| R | 82 | | t | 116 | |
| S | 83 | | u | 117 | |
| T | 84 | | v | 118 | |
| U | 85 | | w | 119 | |
| V | 86 | | x | 120 | |
| W | 87 | | y | 121 | |
| X | 88 | | z | 122 | |
| Y | 89 | | { | 123 | |
| Z | 90 | | \| | 124 | |
| [ | 91 | | } | 125 | |
| / | 92 | | ~ | 126 | |
| ] | 93 | | | | |