BX(Base register): This register is commonly used as a pointer to data in memory. Like Ax it also 16 but register that can be split into Bh (High byte) & Low byte.

Assembler is a software tool that translates assembly language code into machine code, which is the binary code that a computer CPU cain execute directly.

Hexadecimal (base16) notation, the digits range from 0-9 and then from A to F. Hexadecimal does not include letters beyond F(G-Z) because it is a base 16system and only requires 16 symbols.

## Extended Binary Coded Decimal Interchange Code (EBCDIC)

Best thing to know that won't stress you

F0-F9 is 0-9

E1: is used for control character (Specifically the "Not Sign")

OX is commonly used to indicate that the number following it is in hexadecimal (basic16) format.

IBM mainframe refers to classs of high performance computer made by (international business machines corporation) dis signed for large scale computing purposes

| Hexadecimal | to Bina | ry Conversion Table |  |
|-------------|---------|---------------------|--|
| 0           |         | 0000                |  |
| 1           |         | 0001                |  |
| 2           |         | 0010                |  |
| 3           |         | 0011                |  |
| 4           |         | 0100                |  |
| 5           |         | 0101                |  |
| 6           |         | 0110                |  |
| 7           |         | 0111                |  |
| 8           | 8 1000  |                     |  |
| 9           |         | 1001                |  |
| Α           |         | 1010                |  |

| 1   | 3   | 10   | 011 |
|-----|-----|------|-----|
| (   | C   | 11   | .00 |
|     | )   | 11   | .01 |
|     | E   | 11   | .10 |
|     | F   | 11   | .11 |
| Dec | Hex | Char |     |
| 64  | 40  | @    |     |
| 65  | 41  | A    |     |
| 66  | 42  | В    |     |
| 67  | 43  | С    |     |
| 68  | 44  | D    |     |
| 69  | 45  | E    |     |
| 70  | 46  | F    |     |
| 71  | 47  | G    |     |
| 72  | 48  | Н    |     |
| 73  | 49  |      |     |
| 74  | 4A  |      |     |

| 88  | 58       | X |
|-----|----------|---|
| 89  | 59       | Y |
| 90  | 5A       | Z |
| 91  | 5B       | [ |
| 92  | 5C       |   |
| 93  | 5D       | ] |
| 94  | 5E       | 1 |
|     |          | ^ |
| 95  | 5F       |   |
| 96  | 60       | - |
| 97  | 61       | a |
| 98  | 62       | b |
| 99  | 63       | С |
| 100 | 64       | d |
| 101 | 65       | e |
| 102 | 66       | f |
| 103 | 67       | g |
| 104 | 68       | h |
| 105 | 69       | - |
| 106 | 6A       |   |
| 107 | 6B       |   |
| 107 |          |   |
| 108 | 6C       | 1 |
| 109 | 6D       | m |
| 110 | 6E       | n |
| 111 | 6F       | 0 |
| 112 | 70       | p |
| 113 | 71       | q |
| 114 | 72       | r |
| 115 | 73       | S |
| 116 | 74       | t |
| 117 | 75       | u |
| 118 | 76       | V |
|     | <u> </u> | 1 |

| 119      | 77       | W   |  |
|----------|----------|-----|--|
| 120      | 78       | х   |  |
| 121      | 79       | У   |  |
| 122      | 7A       | Z   |  |
| 123      | 7B       | 1   |  |
| 124      | 7C       |     |  |
| 125      | 7D       |     |  |
| 126      | 7E       | ~   |  |
| 32       | 20       |     |  |
| 33       | 21       |     |  |
| 34       | 22       | 1 1 |  |
| 35       | 23       | #   |  |
| 36       | 24       | \$  |  |
| 37       | 25       | %   |  |
| 38       | 26       | &   |  |
| 39       | 27       |     |  |
| 40       | 28       | (   |  |
| 41       | 29       | )   |  |
| 42       | 2A       | *   |  |
| 43       | 2B       | +   |  |
| 44       | 2C       |     |  |
| 45       | 2D       | -   |  |
| 46       | 2E       |     |  |
| 47       | 2F       | /   |  |
| 48       | 30       | 0   |  |
|          |          | 1   |  |
| 49       | 31       | 1   |  |
| 49<br>50 | 31<br>32 | 2   |  |
|          |          |     |  |
| 50       | 32       | 2   |  |

| 69    | 45    | E  |
|-------|-------|----|
| 70    | 46    | F  |
| 71    | 47    | G  |
| 72    | 48    | Н  |
| 73    | 49    | 1  |
| 74    | 4A    |    |
|       |       |    |
| 75    | 4B    | К  |
| 76    | 4C    | L  |
| 77    | 4D    | М  |
| 78    | 4E    | N  |
| 79    | 4F    | 0  |
| 80    | 50    | Р  |
| 81    | 51    | Q  |
| 82    | 52    | R  |
| 83    | 53    | S  |
| 84    | 54    | T  |
| or or |       |    |
| 85    | 55    | U  |
| 86    | 56    | V  |
| 87    | 57    | W  |
| 0/    | 3/    | VV |
| 88    | 58    | X  |
| 89    | 59    | Y  |
|       |       |    |
| 90    | 5A    | Z  |
| 91    | 5B    |    |
|       |       |    |
| 92    | 5C    |    |
| 93    | 5D    |    |
| 94    | 5E    |    |
| 95    | 5F    |    |
| 33    | 31    |    |
| 96    | 60    |    |
| 97    | 61    | a  |
| 98    | 62    | b  |
|       |       |    |
| 99    | 63    | Ċ  |
| 100   | 64    | d  |
| 101   | 65    | e  |
| 102   | 66    | f  |
| 103   | 67    | g  |
| 404   | 60    |    |
| 104   | 68    | h  |
| 105   | 69    | i  |
| 106   | 6A    |    |
| TOD   | DA DA |    |
| 107   | 6B    | К  |
| 108   | 6C    | 1  |
|       |       |    |
| 109   | 6D    | m  |
|       |       |    |

| 110    | 6E |   | n |
|--------|----|---|---|
| 111    | 6F |   | 0 |
| 112    | 70 |   | р |
| 113    | 71 |   | q |
| 114    | 72 |   | r |
| 115    | 73 |   | S |
| 116    | 74 |   | t |
| 117    | 75 |   | u |
| 118    | 76 |   | V |
| 119    | 77 |   | W |
| 120    | 78 |   | X |
| 121    | 79 |   | У |
| 122    | 7A |   | Z |
| 123    | 7B | { |   |
| 124    | 7C |   |   |
| 125    | 7D |   |   |
| 126    | 7E |   |   |
| 127 7F |    |   |   |