The NEG instruction

- The NEG instruction in M68000 convert a positive value into negative value and vice verse.

  Example:

  ```
  2's complement representaion:    00000111
  value represented:                      7

  2's complement representaion:    11111001
  value represented:                     -7
  ```

- **Syntax** of the **NEG** instruction:

  ```
  NEG.s  Dn     Negates the value in data register Dn


  s = size, can be any one of: B (byte), W (word) or L (long word)
  ```

- **Examples:**

  ```
          +----------+----------+----------+----------+
  D0 = | 00000000 | 10101010 | 11110000 | 00001111 |
          +----------+----------+----------+----------+


  NEG.B D0        (use 8 bit operand in D0 !)

  Result:
          +----------+----------+----------+----------+
  D0 = | 00000000 | 10101010 | 11110000 | 11110001 |
          +----------+----------+----------+----------+

  Because if we negate 00001111, we will get: 11110001
  ```

  ```
          +----------+----------+----------+----------+
  D0 = | 00000000 | 10101010 | 11110000 | 00001111 |
  ```

```
        +----------+----------+----------+----------+


NEG.W D0              (use 16 bit operand in D0 !)

Result:
        +----------+----------+----------+----------+
D0 = |  00000000 | 10101010 | 00001111 | 11110001 |
        +----------+----------+----------+----------+

Because if we negate:   11110000 00001111

we will get:            00001111 11110001
```