

Shift operations

- consider a 4 bit word

- | | | | |
|---|---|---|---|
| 0 | 1 | 1 | 0 |
|---|---|---|---|

 - decimal value 6

Shifting left

- if we shift this left by one bit we get:

- | | | | |
|---|---|---|---|
| 1 | 1 | 0 | 0 |
|---|---|---|---|

 - decimal value 12, note that we automatically insert a 0 in bit position 0

Shifting right

- if we shift:

- | | | | |
|---|---|---|---|
| 0 | 1 | 1 | 0 |
|---|---|---|---|

- right by one bit we get:

- | | | | |
|---|---|---|---|
| 0 | 0 | 1 | 1 |
|---|---|---|---|

 - decimal value 3, note that we automatically insert a 0 in bit position 3