

Bit-wise "And" and Shift Operators

& = bit-wise "and"

>> = shift right operator

<< = shift left operator

1 & 1 = 1

1 & 0 = 0

0 & 1 = 0

0 & 0 = 0

1 = true

0 = false

Example:

The output of the code segment

```
int a, b, c, d, e;
/**/
a = 0b10100101;
b = 0b11110000;
c = a & b;
d = c >> 4;
e = d << 4;
/**/
System.out.println( "a = " + Integer.toString(a,2) + " = " + a );
System.out.println( "b = " + Integer.toString(b,2) + " = " + b );
System.out.println( "c = " + Integer.toString(c,2) + " = " + c );
System.out.println( "d = " + Integer.toString(d,2) + " = " + d );
System.out.println( "e = " + Integer.toString(e,2) + " = " + e );
```

is

```
a = 10100101 = 165
b = 11110000 = 240
c = 10100000 = 160
d = 1010 = 10
e = 10100000 = 160
```