SQLITE - BITWISE OPERATORS

Bitwise operator works on bits and perform bit-by-bit operation. The truth table for &, and | is as follows:

p	q	p & q	p | q
0	0	0	0
0	1	0	1
1	1	1	1
1	0	0	1

Assume if A = 60; and B = 13; now in binary format they will be as follows:

A = 0011 1100

B = 0000 1101

A&B = 0000 1100

A|B = 0011 1101

~A = 1100 0011

The Bitwise operators supported by SQLite language are listed in the following table. Assume variable A holds 60 and variable B holds 13, then:

Operator	Description	Example
&	Binary AND Operator copies a bit to the result if it exists in both operands.	A & B will give 12 which is 0000 1100
|	Binary OR Operator copies a bit if it exists in either operand.	$A \mid B$ will give 61 which is 0011 1101
~	Binary Ones Complement Operator is unary and has the effect of 'flipping' bits.	A will give -61 which is 1100 0011 in 2's complement form due to a signed binary number.
<<	Binary Left Shift Operator. The left operands value is moved left by the number of bits specified by the right operand.	A << 2 will give 240 which is 1111 0000
>>	Binary Right Shift Operator. The left operands value is moved right by the number of bits specified by the right operand.	A >> 2 will give 15 which is 0000 1111

Example

Here are simple examples showing usage of SQLite Arithmetic Operators:

```
sqlite> .mode line
```

```
sqlite> select 60 | 13;
60 | 13 = 61

sqlite> select 60 & 13;
60 & 13 = 12

sqlite> select  60 ^ 13;
10 * 20 = 200


sqlite>  select  (~60);
(~60) = -61

sqlite>  select  (60 << 2);
(60 << 2) = 240

sqlite>  select  (60 >> 2);
(60 >> 2) = 15
```