How to Set/Unset a Bit in a Flag

Let us say we have a **flags** variable where each bit represents the following:
flags = read bit, write bit, exec bit.

So for read and execute, **flags** would look like:
flags = 00000101

Let's define these bits:
READ_BIT =   00000100
WRITE_BIT =   00000010
EXEC_BIT =   00000001

So **flags** is equal to:
flags =   READ_BIT | EXEC_BIT
**   =   00000100 | 00000001**
**   =   00000101**

Let's say I want to unset the read bit. I take bitwise inverse of **READ_BIT** and bitwise-AND it with **flags**:

flags =	**00000101**
READ_BIT=	**00000100**
~READ_BIT=	**11111011**
Flags & ~READ_BIT=	**00000101 &**
	11111011
flags=	**00000001**

The **READ_BIT** has now been unset in **flags**.

Let's say I want to set the read bit again, I would take **READ_BIT** and bitwise-OR it with **flags**:

flags =	**00000001**
READ_BIT=	**00000100**
**Flags	READ_BIT=**	**00000001 |**
	00000100
flags=	**00000101**

flags is back to where it was.