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| **EX06-06.cpp:** *Dealing with Bitwise Operators* |
| **Line#** | **Code** |
| 12345678910111213141516171819202122232425262728293031323334 | #include <iostream>using namespace std;static void showBits(int bits32) { for (int i = 0; i < 32; i++) { cout << ((bits32 & 0x80000000) != 0); bits32 <<= 1; } cout << endl;}int main() { int x = 3, y = 5; cout << "x:\t"; showBits(x); cout << "y:\t"; showBits(y); cout << "x&y:\t"; showBits(x & y); //Bitwise AND //cout<<"x|y:\t"; showBits(x|y); //Bitwise OR //cout<<"x^y:\t"; showBits(x^y); //Bitwise XOR //cout<<"~x:\t"; showBits(~x); //Inversion //cout<<"x>>1:\t"; showBits(x>>1); //Shift Right //cout<<"x>>2:\t"; showBits(x>>2); //Shift Right //cout<<"x<<1:\t"; showBits(x<<1); //Shift Left //cout<<"x<<2:\t"; showBits(x<<2); //Shift Left //x = -1333333333; //cout<<"x:\t"; showBits(x); //cout<<"x>>1:\t"; showBits(x>>1); //Shift Right //cout<<"x<<1:\t"; showBits(x<<1); //Shift Left return 0;} |

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| EX06-06b.cpp |
| Line# | Code |
| **1****2****3****4****5****6****7****8****9****10****11****12****13****14****15****16****17****18****19****20****21****22****23****24****25****26****27****28****29****30****31****32****33****34****35****36****37****38****39****40****41****42****43****44****45****46****47****48****49****50****51****52****53****54****55****56****57****58** | #include <iostream>**using namespace** std;#define HAS\_CASH 0x00000001#define HAS\_CAR 0x00000002#define HAS\_CERT 0x00000004#define HAS\_CAREER 0x00000008#define HAS\_CONDO 0x00000010**static void** showBits(**int** bits32) { **for** (**int** i = 0; i < 32; i++) {cout << ((bits32 & 0x80000000) != 0); bits32 <<= 1; } cout << endl;}**int** main() { /\* cout << "HAS\_CASH:\t"; showBits(HAS\_CASH); cout << "HAS\_CAR:\t"; showBits(HAS\_CAR); cout << "HAS\_CERT:\t"; showBits(HAS\_CERT); cout << "HAS\_CAREER:\t"; showBits(HAS\_CAREER); cout << "HAS\_CONDO:\t"; showBits(HAS\_CONDO); \*/ /\* int status = HAS\_CASH | HAS\_CAR; cout << "status:\t"; showBits(status); //I sold my car status &= ~HAS\_CAR; cout << "status:\t"; showBits(status); //I found a job status |= HAS\_CAREER; cout << "status:\t"; showBits(status); //Got a new car and also new certification status |= (HAS\_CAR | HAS\_CERT); cout << "status:\t"; showBits(status); //showBits(status); //showBits(HAS\_CAR); int mask = HAS\_CAR | HAS\_CERT; if ((status & mask) != 0) cout << "Has CAR OR Cert" << endl; if ((status & mask) == mask) cout << "Has CAR AND Cert" << endl; //int mask = HAS\_CAR | HAS\_CERT; //cout << "mask:\t"; showBits(mask); //status |= mask; //SET Operation //status ^= mask; //TOGGLE Operation //cout << "~mask:\t"; showBits(~mask); //status &= ~mask; //CLEAR Operation //cout << "status:\t"; showBits(status); \*/ **return** 0;} |