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| **All elements of Set in C++** | |
| #include <iostream>  using namespace std;  void set(int x) {  for (int i = 0; i < 32; ++i) {  if (x & (1 << i)) {  cout << i << endl;  }  }  }  int main() {  int x = 282; // Binary representation: 100011010  // int x = 7; // Binary representation: 111  set(x);  return 0;  } | **Binary of 282**  Decimal: 282  Binary : 00000000 00000000 00000001 00011010  Bits : ↑ ↑ ↑ ↑  Positions: 8 5 3 1 ← these are the set bits  **🔁 Loop Table**   | **i (bit position)** | **1 << i (binary)** | **x & (1 << i)** | **Is Bit Set?** | **Output** | | --- | --- | --- | --- | --- | | 0 | 000...0001 | 0 | ❌ | - | | 1 | 000...0010 | 2 | ✅ | 1 | | 2 | 000...0100 | 0 | ❌ | - | | 3 | 000...1000 | 8 | ✅ | 3 | | 4 | 000..1\_0000 | 0 | ❌ | - | | 5 | 000.10\_0000 | 32 | ✅ | 5 | | 6 | 000.100\_0000 | 0 | ❌ | - | | 7 | 001.000\_0000 | 0 | ❌ | - | | 8 | 010.000\_0000 | 256 | ✅ | 8 | | ... | ... | 0 | ❌ | - | | 31 | 100...0000 (bit 31) | 0 | ❌ | - |   **✅ Final Output**  1  3  5  8 |
| Output:-  1  3  4  8 | |