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//
// bitcpy.cpp
// FreeRangeInterviewTest
//
// Created by Stewart Bracken on 2/5/14.
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//

#ifndef __FreeRangeInterviewTest__bitcpy__
#define __FreeRangeInterviewTest__bitcpy__

#include <iostream>

void bitcpy(void* src, void* dst, int numBits);

#endif /* defined(__FreeRangeInterviewTest__bitcpy__) */

void bitcpy(void* src, void* dst, int numBits){
    char* srcC = static_cast<char*>(src);
    char* dstC = static_cast<char*>(dst);
    // Copy as many bytes as possible
    while (numBits >= 8){
        numBits -= 8;
        *dstC = *static_cast<char*>(srcC); //copy 1 byte at a time into dst
        srcC++;
        dstC++;
    }
    // Copy the remianing bits using bit operators
    if (numBits > 0 ){
        char mask = 1 << 7; //with a one in the most significant bit position
        while (numBits > 0){
            char result = mask & *srcC;
            if ( result )
                *dstC |= result; //set it
            else
```

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        *dstC &= ~(mask); //clear it
        numBits--;
        mask >>= 1;
    }
}
```