// Iterative C program to compute modular power

#include <stdio.h>

/\* Iterative Function to calculate (x^y)%p in O(log y) \*/

int power(int x, unsigned int y, int p)

{

    int res = 1;      // Initialize result

    x = x % p;  // Update x if it is more than or

                // equal to p

    while (y > 0)

    {

        // If y is odd, multiply x with result

        if (y & 1)

            res = (res\*x) % p;

        // y must be even now

        y = y>>1; // y = y/2

        x = (x\*x) % p;

    }

    return res;

}

// Driver program to test above functions

int main()

{

   int x = 2;

   int y = 5;

   int p = 13;

   printf("Power is %u", power(x, y, p));

   return 0;

}