//DIFFIE HELLMAN PROGRAM

#include <stdio.h>

// Function to compute a^m mod n

int compute(int a, int m, int n)

{

int r;

int y = 1;

while (m > 0)

{

r = m % 2;

if (r == 1)

y = (y\*a) % n;

a = a\*a % n;

m = m / 2;

}return y;

}

int main()

{

int p;

int g;

int a, b;

int A, B;

printf("Enter the value of modulus and Base:");

scanf("%d %d",&p,&g);

a = 6;

A = compute(g, a, p);

b = 15;

B = compute(g, b, p);

int keyA = compute(B, a, p);

int keyB = compute(A, b, p);

printf("Alice's Secret Key is %d\nBob's Secret Key is %d\n", keyA, keyB);

return 0;

}

OUTPUT

