**Code:**

clc;

g = 7;

p = 23;

printf("\nThe result are as follows: \n\n");

x = 3;

y = 6;

R1 = modulo(g^x,p);

R2 = modulo(g^y,p);

printf("1)Alice choose x=%d & calculates R1=%d\n\n2)Bob chooses y=%d & calculates R2=%d\n\n3)Alice sends the number %d to Bob \n\n4)Bob sends the number %d to Alice \n\n",x,R1,y,R2,R1,R2);

K\_Alice = modulo((R2)^x,p);

K\_Bob = modulo((R2)^y,p);

K\_Final = modulo(g^(x\*y),p);

printf('5)Alice calculater the symmetric key K=%d \n\n6)Bob calculates the symmetric key k=%d\n\n7)K\_Final=%d\n\n',K\_Alice,K\_Bob,K\_Final);

**Output:**

The result are as follows:

1)Alice choose x=3 & calculates R1=21

2)Bob chooses y=6 & calculates R2=4

3)Alice sends the number 21 to Bob

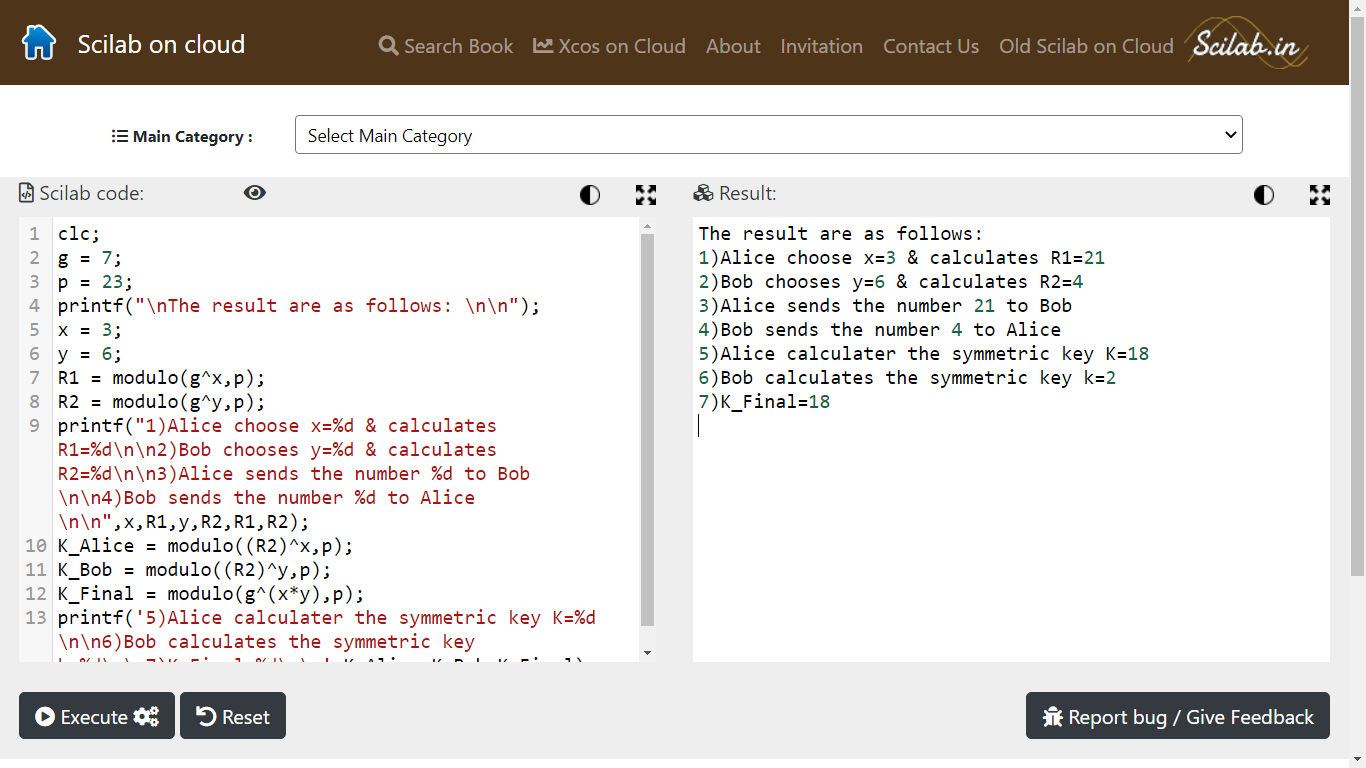
4)Bob sends the number 4 to Alice

5)Alice calculater the symmetric key K=18

6)Bob calculates the symmetric key k=2

7)K\_Final=18

**Screenshot:**

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