**Information Security**

* **Practical-7-1: Implement Diffi-Hellmen Key exchange Method.**

**CODE:**

#include<stdio.h>

long int power(int a,int b,int mod)

{

long long int t;

if(b==1)

return a;

t=power(a,b/2,mod);

if(b%2==0)

return (t\*t)%mod;

else

return (((t\*t)%mod)\*a)%mod;

}

long long int calculateKey(int a,int x,int n)

{

return power(a,x,n);

}

int main()

{

int n,g,x,a,y,b;

printf("Enter the value For First Key N : ");

scanf("%d",&n);

printf("Enter the value For Second Key G : ");

scanf("%d",&g);

printf("Enter the value of x for the first person : ");

scanf("%d",&x); a=power(g,x,n);

printf("Enter the value of y for the second person : ");

scanf("%d",&y); b=power(g,y,n);

printf("key for the first person is : %lld\n",power(b,x,n));

printf("key for the second person is : %lld\n",power(a,y,n));

return 0;

}

**Output:**

