**Assignment No. 3 (Diffie Hellman Key Exchange Algo.)**
**TA39**

**CODE :-**

```
#DIFFIE HELLMAN KEY EXCHANGE
P = int(input("Enter Public Key P: "))
G = int(input("Enter Public Key G: "))
a = int(input("Enter Private Key of Alice: "))
b = int(input("Enter Private Key of Bob: "))
x = (G ** a) % P
y = (G ** b) % P
print(f"Public Key obtained by Alice:{x}")
print(f"Public Key obtained by Bob:{y}")
#Compute symmetric keys-
ka = (y ** a) % P
kb = (x ** b) % P
print(ka)
print(kb)
```

**OUTPUT:-**

```
Enter Public Key P: 11
Enter Public Key G: 7
Enter Private Key of Alice: 7
Enter Private Key of Bob: 11
Public Key obtained by Alice:6
Public Key obtained by Bob:7
6
6

=== Code Execution Successful ===
```