

Day 26 coding Statement : Write a program to calculate Maximum number of handshakes

Description: Get the number of people in the room as input from the user. Then calculate the maximum number of handshakes possible among that people.

For e.g. If there are N people in the room then the first person has to shake hand with N-1 people and second person has to shake hand with N-1-1 people i.e., N-2 handshakes are possible. Thus, it goes on.

So total hand shakes = $N-1 + N-2 + N-3 + \dots + 1 + 0$

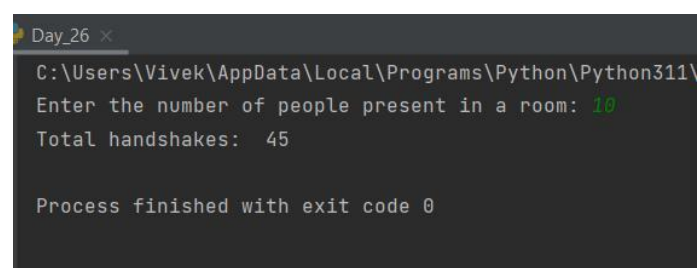
Input: 10

Output: 45

CODE

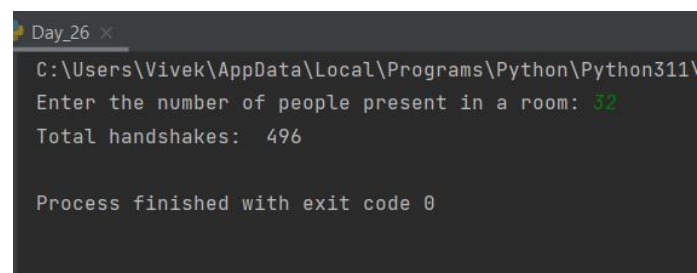
```
num = int(input("Enter the number of people present in a room: "))
handshake = 0
for i in range(1, num):
    handshake += i
print("Total handshakes: ", handshake)
```

OUTPUT:



```
Day_26 x
C:\Users\Vivek\AppData\Local\Programs\Python\Python311\
Enter the number of people present in a room: 10
Total handshakes: 45

Process finished with exit code 0
```



```
Day_26 x
C:\Users\Vivek\AppData\Local\Programs\Python\Python311\
Enter the number of people present in a room: 32
Total handshakes: 496

Process finished with exit code 0
```