**Q. Pair with same divisors**

An integer n is said to be the divisor of another integer m if m leaves a remainder 0 when divided by n. We define a function: d(N) which is the number of pairs (a, b) such that, a<b, a\*b=N and both the integers a and b have the same number of divisors. For 24, we can have the pairs: (2,12), (3,8), (4,6), (1,24), (8,3). Here in any of the pair, the number of divisors of both the integers in a pair is not the same. Hence, d (24) = 0. For 48, the pairs are: (3,16), (2,24), (4,12), (1,48) and (6,8). Here the pair (6,8) is a pair such that both 6 and 8 have 4 divisors. That is, (6,8) is a pair in which both the integers have same number of divisors. Other pairs of 48, do not have this property. Hence d (48) = 1.

Given a positive integer N, write a code to compute the value of d(N). For a given number N, if no pairs (a, b) such that a<b, a\*b=N, are possible, your code should output -1

Input Format:

Enter the number N

Output Format:

Value of d(N)

**Python Program**

n = int(input())  
d = 0  
pairs = 0  
  
  
def factors(a, b):  
 la = []  
 lb = []  
 for counter in range(2, a):  
 if a%counter == 0:  
 la.append(counter)  
 for counter in range(2, b):  
 if b%counter == 0:  
 lb.append(counter)  
 if len(la) == len(lb):  
 return True  
 return False  
  
  
for counter in range(1, (int(n/2)+1)):  
 if n%counter == 0 and counter < n//counter:  
 pairs += 1  
 Flag1 = factors(counter, n//counter)  
 if Flag1:  
 d += 1  
if pairs > 0:  
 print(d)  
else:  
 print(-1)