

4. Write a program to check the given no is Armstrong or not using recursive function.

Code:

```
def sum_of_powers(n, num_digits):  
    if n == 0:  
        return 0  
    return (n % 10) ** num_digits + sum_of_powers(n // 10, num_digits)  
  
def is_armstrong(n):  
    num_digits = len(str(n))  
    return n == sum_of_powers(n, num_digits)  
  
number = int(input("Enter a number: "))  
  
if is_armstrong(number):  
    print(f"{number} is an Armstrong number")  
else:  
    print(f"{number} is not an Armstrong number")
```

Output:

```
Enter a number: 153  
153 is an Armstrong number
```

Time Complexity:

- $T(n) = O(\log(n))$