

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

Program:

```
def count_digits(n):
    if n==0:
        return 0
    return 1+count_digits(n//10)
def is_armstrong_recursive(n,num_digits):
    if n==0:
        return 0

return(n%10)**num_digits+is_armstrong_recursive(n//10,num_digits)
def is_armstrong(n):
    num_digits=count_digits(n)
    return n==is_armstrong_recursive(n,num_digits)
num=141
if is_armstrong(num):
    print(num,"is a armstrong number")
else:
    print(num,"not a armstrong number")
```

Ouput:

```
C:\Users\srika\Desktop\CSA0863\pythonProject\.venv\Scripts\python.exe "C:\Users\srika\Desktop\CSA0863\pythonProject\problems\CSV files.py"
141 not a armstrong number

Process finished with exit code 0
```

TIME COMPLEXITY:

$O(2^N)$