

CSE 2201

LAB 1 — Section 6.

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Preliminary testing

① $O(n^2)$

② $O(n)$

Recursion

① ~~$O(\log_2 n)$~~ $O(\log_2 n)$

② $O(n)$

③ $O(\log_3 n)$

④ For $T(n/2)$ recursion

• worst case is $O(\log_2 n)$

• but worst case can in theory be even larger, \therefore we can consider

$O(n^2)$ as worst case.

A second answer is, for $n=1$, ~~both~~

$O(\log_2 n)$ and $O(n^2)$ are both 1,

```
1 n=int(input())
2 a=n
3 sum=0
4 while n>0:
5     r=n%10
6     sum=sum+r*r*r
7     n=n/10
8 if a==sum:
9     print("Armstrong Number")
10 else:
11     print("It is not an Armstrong Number")
12
```