

$$f_n = 0$$

$$g_n = 1$$

$$f_n + s_n = \text{newtonums}$$

$$f_n = s_n$$

$$s_n = n$$

$$\text{for}(i=0; i \leq n; i++) \{$$

$$\text{cout}(f_n);$$

$$nn = f_n + s_n; \rightarrow f_n = s_n; \rightarrow s_n = nn$$

$$\begin{array}{ccccccc} & & 1 & & 1 & & 1 \\ & & 2 & & 2 & & 2 \\ \downarrow & & \downarrow & & \downarrow & & \downarrow \\ 0 & 1 & 1 & 2 & 2 & 3 & \end{array}$$

$$i=0 / i=1 / \dots 2 / i=3$$

$$nn = f_n + s_n \quad i=4$$

$$s_n = 2 + 3$$

$$f_n = 3(s_n)$$

$$s_n = 5(nn)$$

$$\begin{array}{c} 0 \\ 1 \\ 2 \\ 3 \\ 5 \end{array}$$

```
int fn=0, sn=1, next=0  
for (i=0; i<=n; i++)
```

```
    cout<<fn<<endl;  
    next=fn+sn;  
    fn=sn;  
    sn=next;
```

```
}
```

n = 321    4756

Reverse,     $\downarrow$

Sum of digit

find largest digit = ?

find smallest digit = ?



$$n \text{ Sq} = (n \times n) \rightarrow$$

Q digit count



21.

$n^2 =$   
1  
3  
2

Abcdeg  
deg  
eg

38569

$n_1 = 569^2$   $\Leftarrow$

$n = \text{last 3 dgt} = 569$

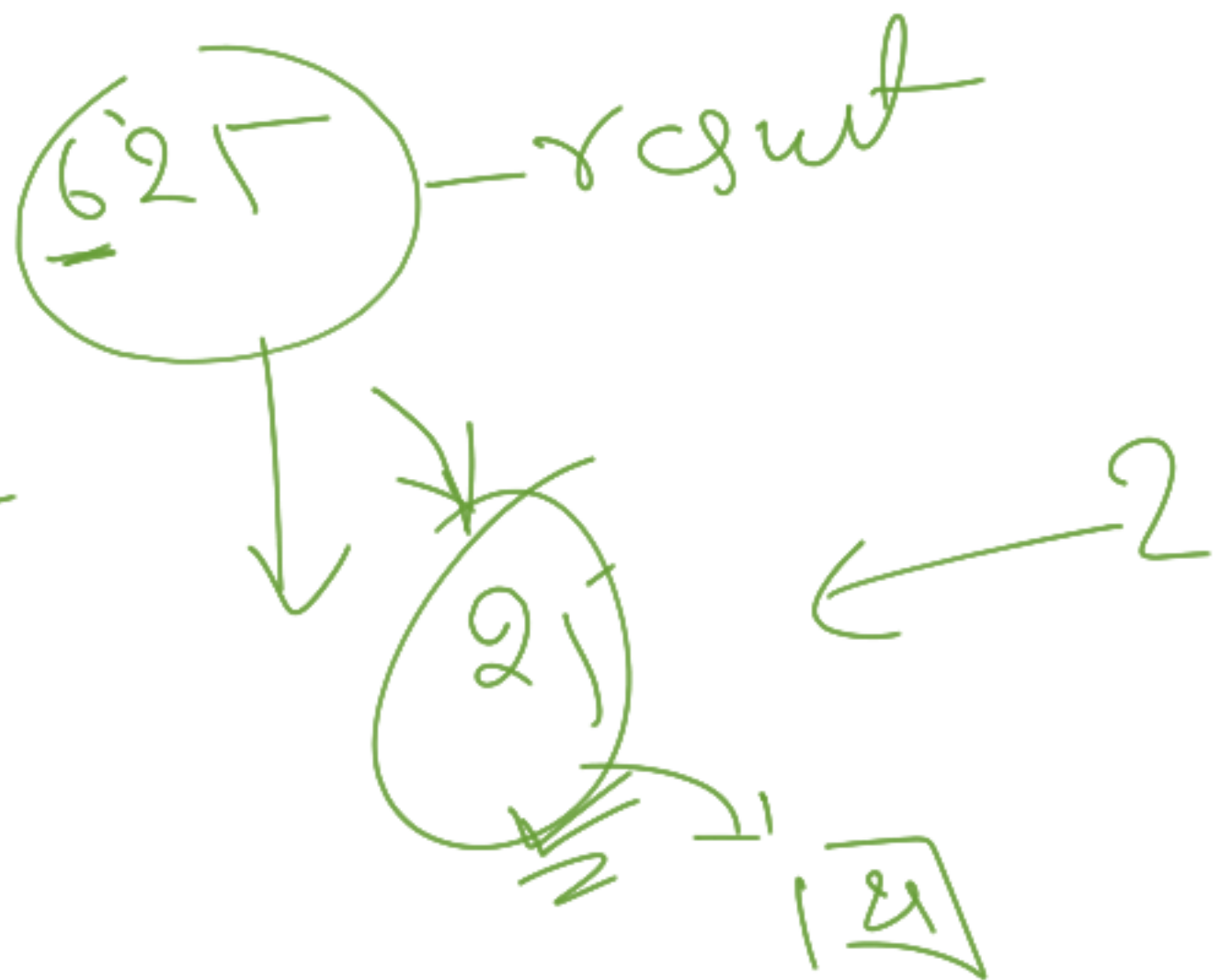
$n = n_1$

True - Auto  $\checkmark$   
for not  $\cap$

$0 = 25$  Autor

$25^2 =$  625 - result

no of digit  
2



n: A

$$21 = 21 \quad \checkmark$$

$$21 = 25 \quad \times$$

Armstrong

121

153

no of digit = 3

digit sum = 0

$$1^3 + 5^3 + 3^3 =$$

$$1 + 121 + 21$$

Result  
11  
153

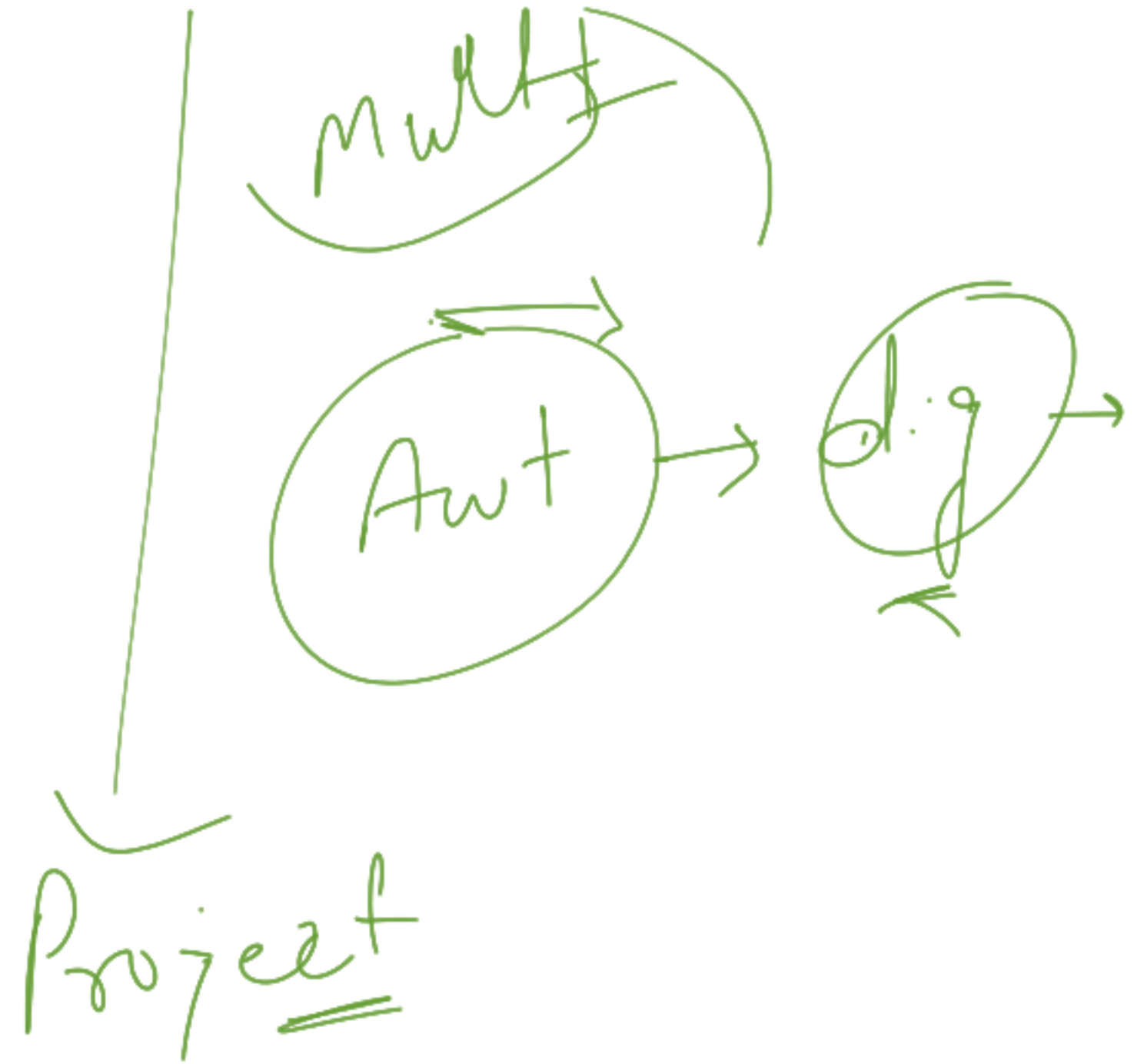
Exception hand

try

catch

multiple cat

final





Armstrong

Palindrome

Automorphic

Fibonacci

find largest digit / smallest digit in a number  
eg  $\rightarrow$  2416  $\rightarrow$  largest - 6  
smallest  $\rightarrow$  1