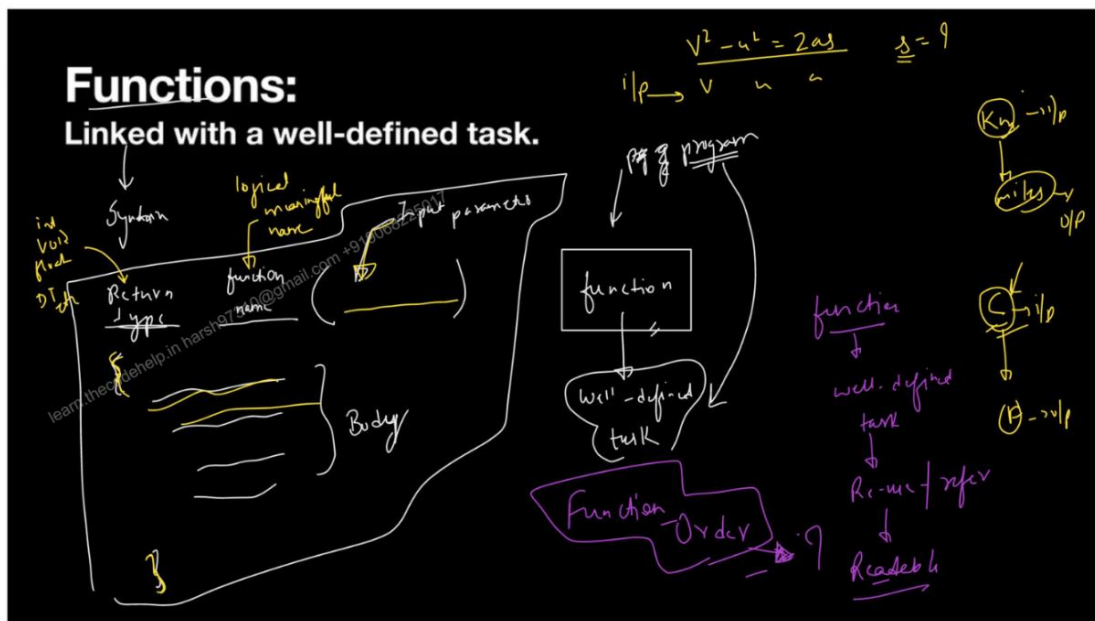
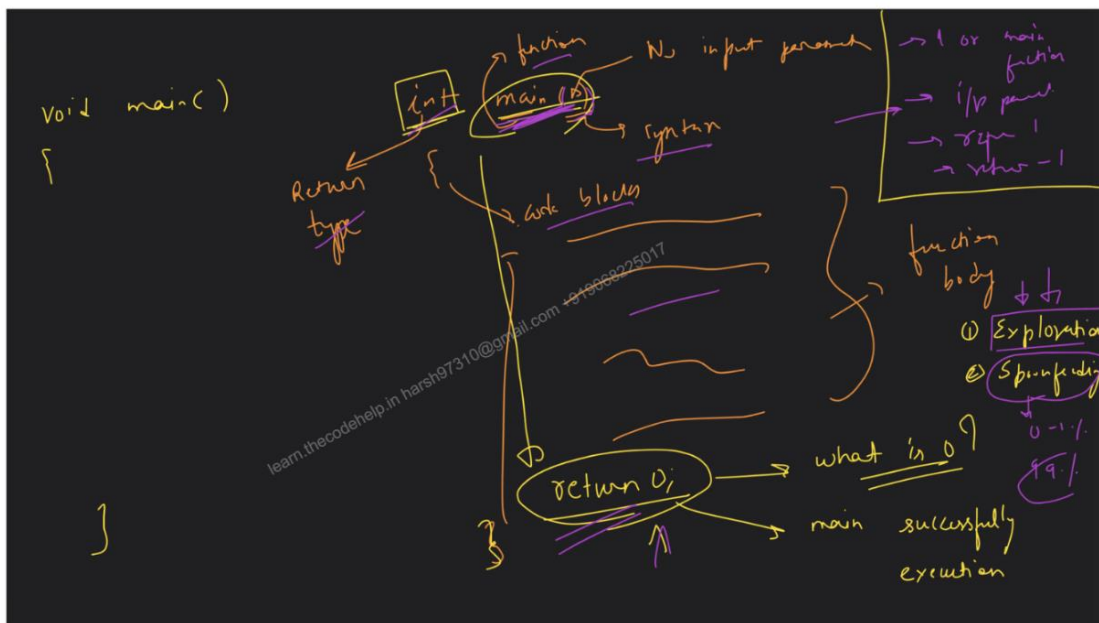
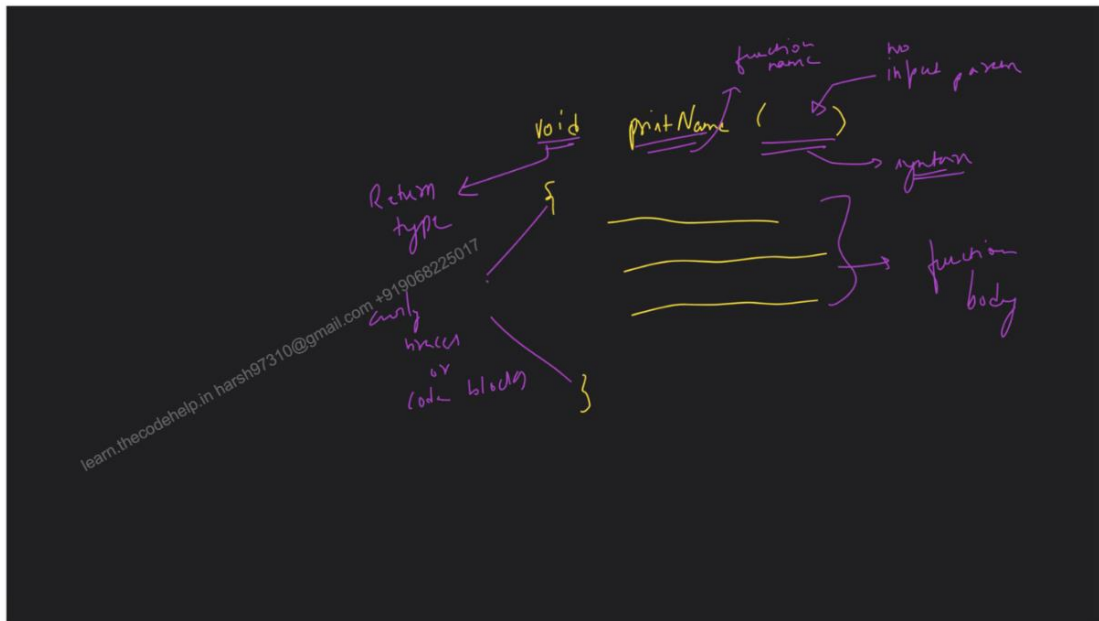


Functions & Problem Statements

Instructor: Love Babbar







Why Functions ?

lengthy or Bulky
not Reusing
Buggy
Readable

int
1th

8-10

30
100

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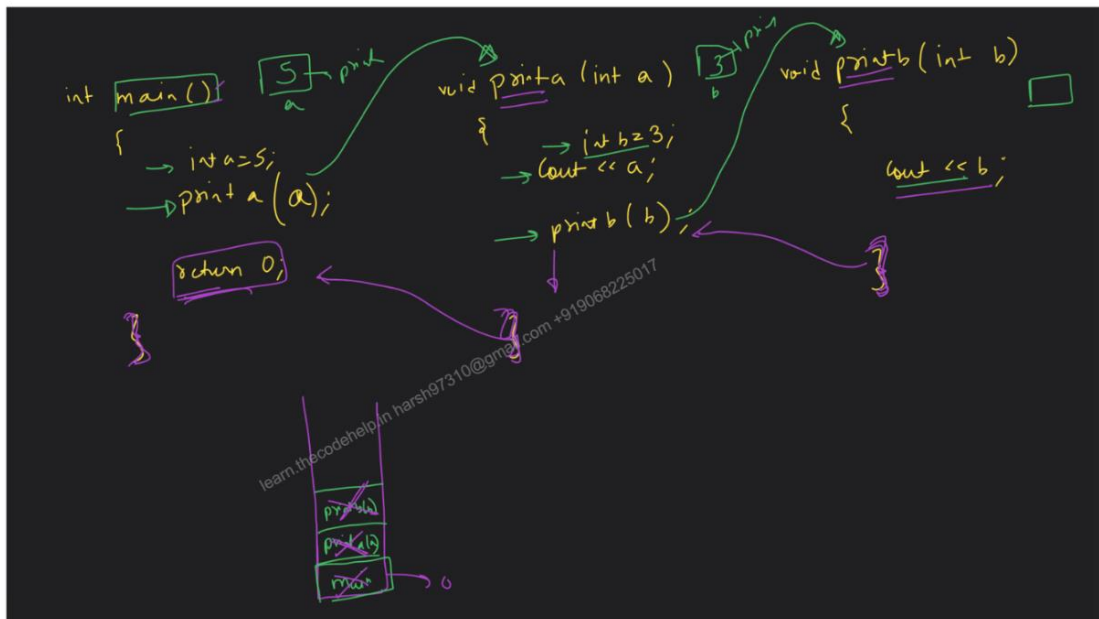
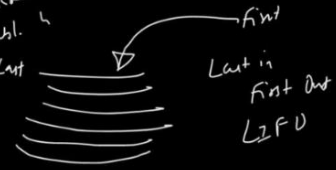
Function Call Stack:

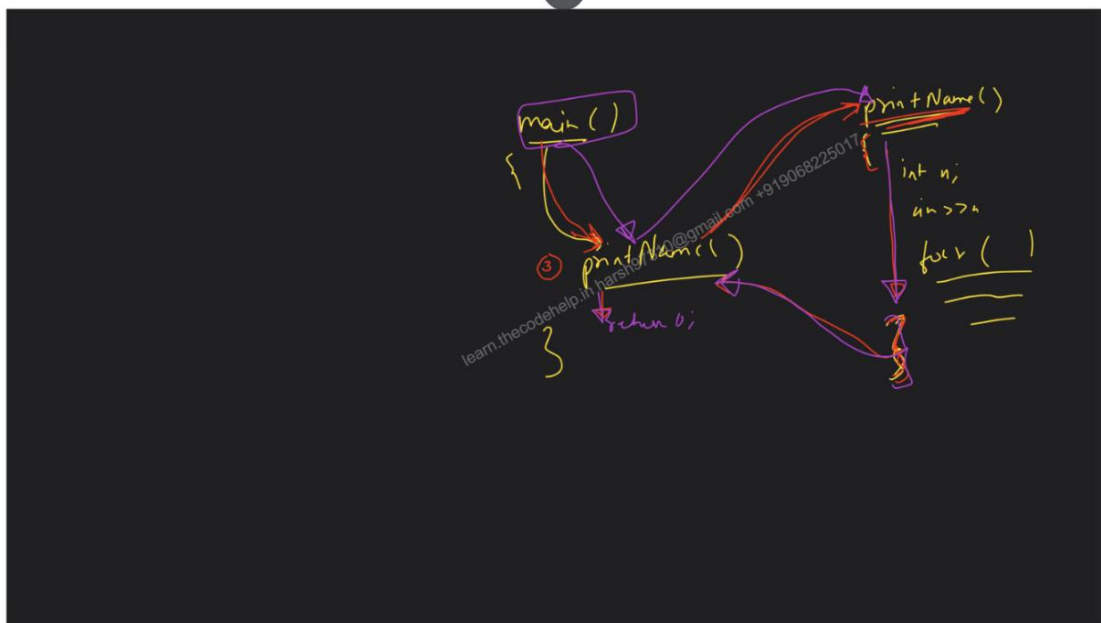
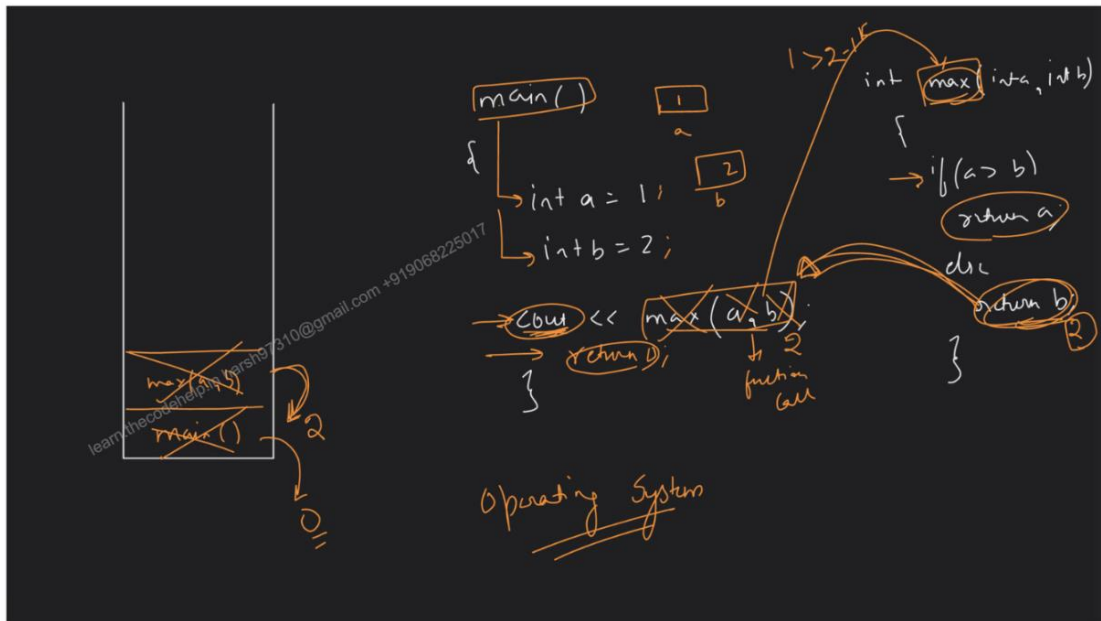


- function call
- Kisi function me dusre function ko call krta h
- function k kisi kisi local variable h
- function kya return kara h

Stack ?
 ↑ Data Structure
 data stored in a specific way

Stack:



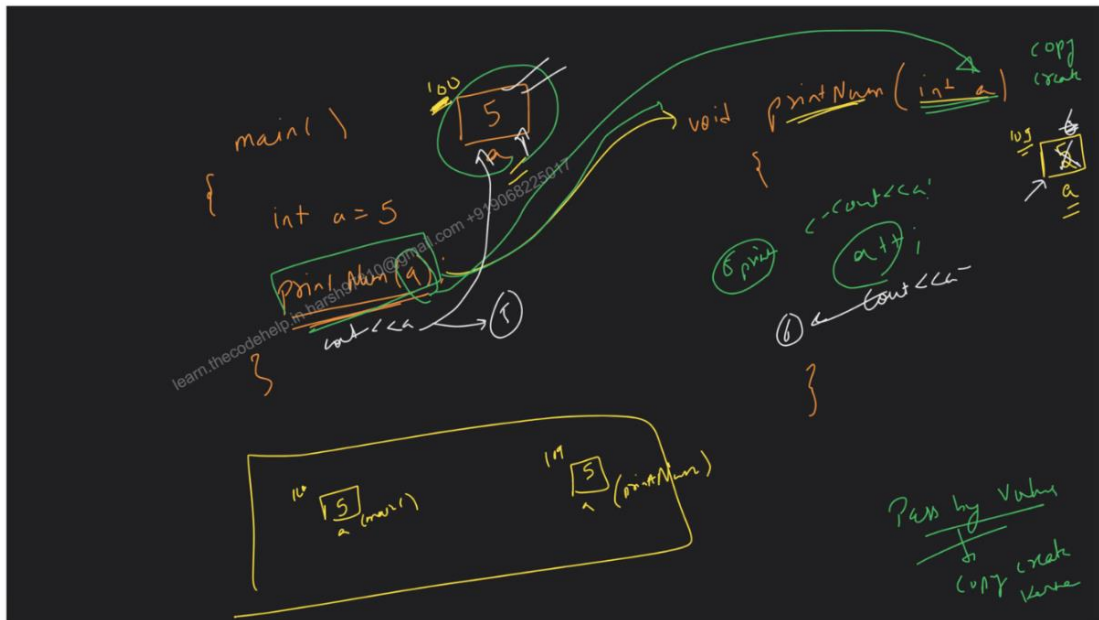


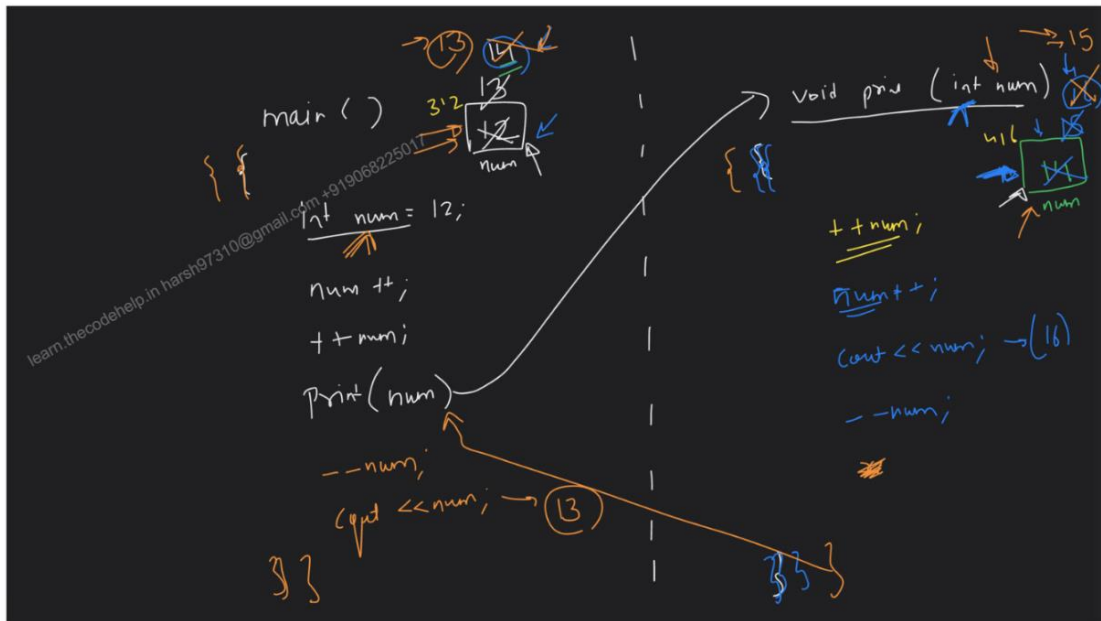
Pass by Value Concept:

Bhai Copy Create hogi

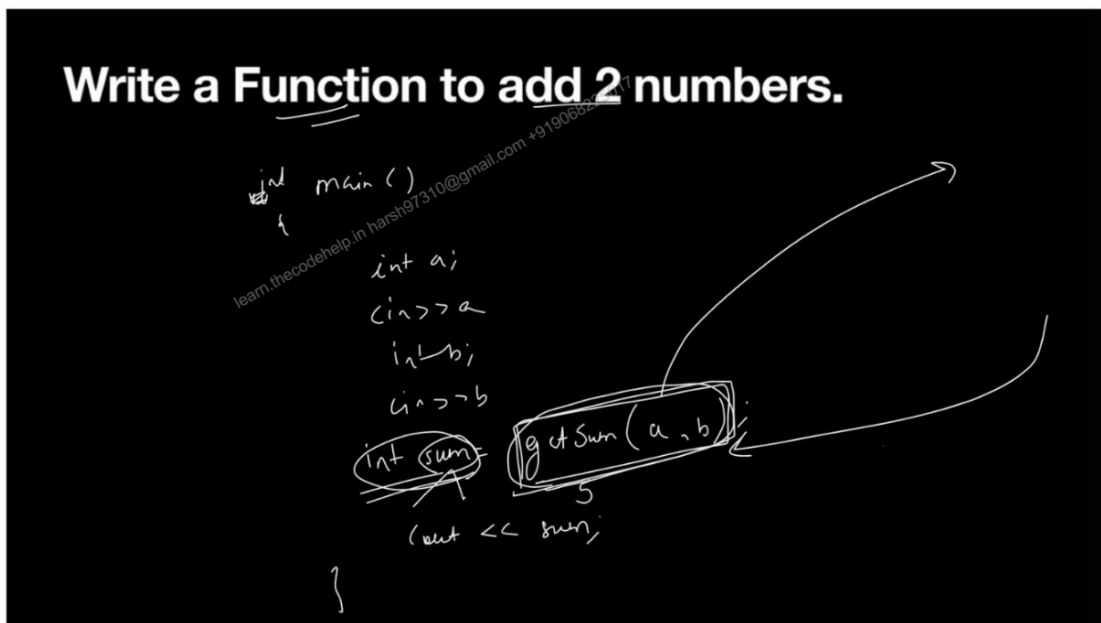
Actual value pass nahi hogi

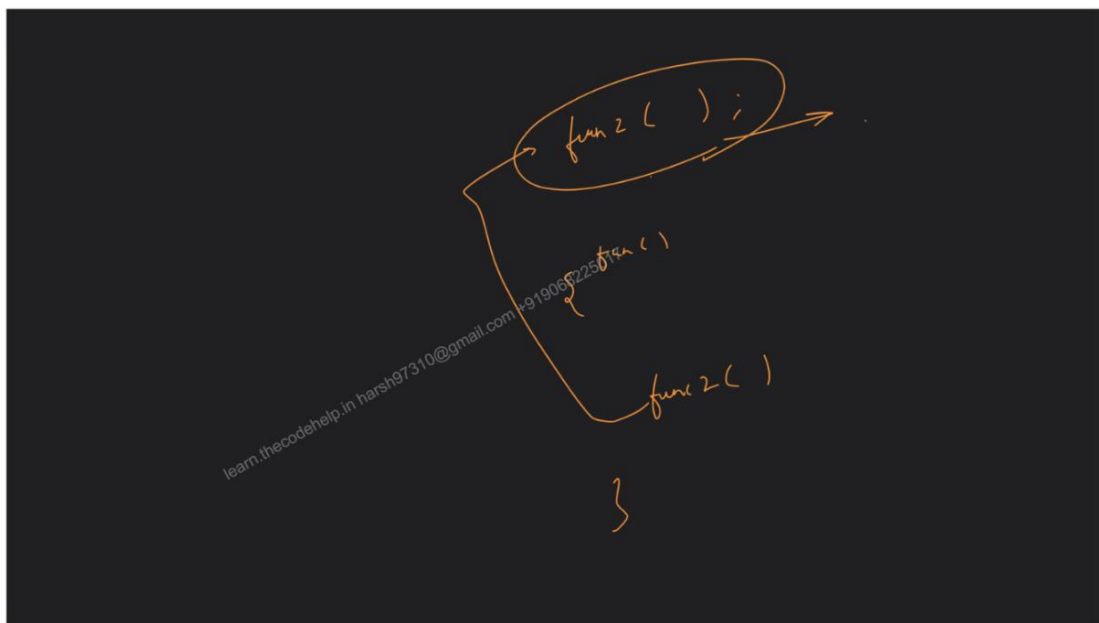
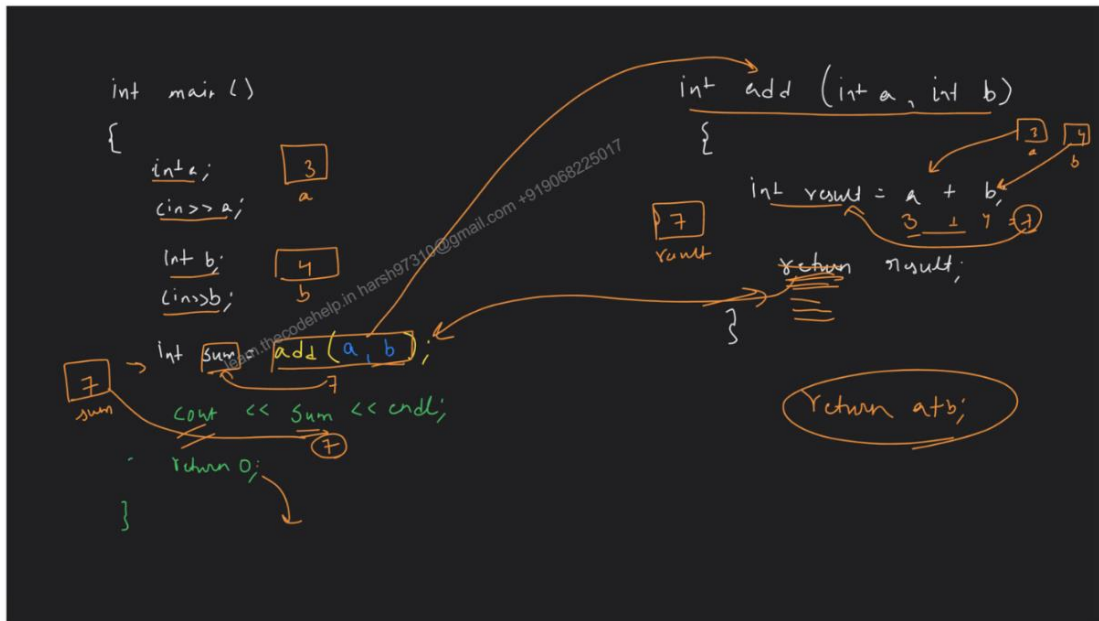
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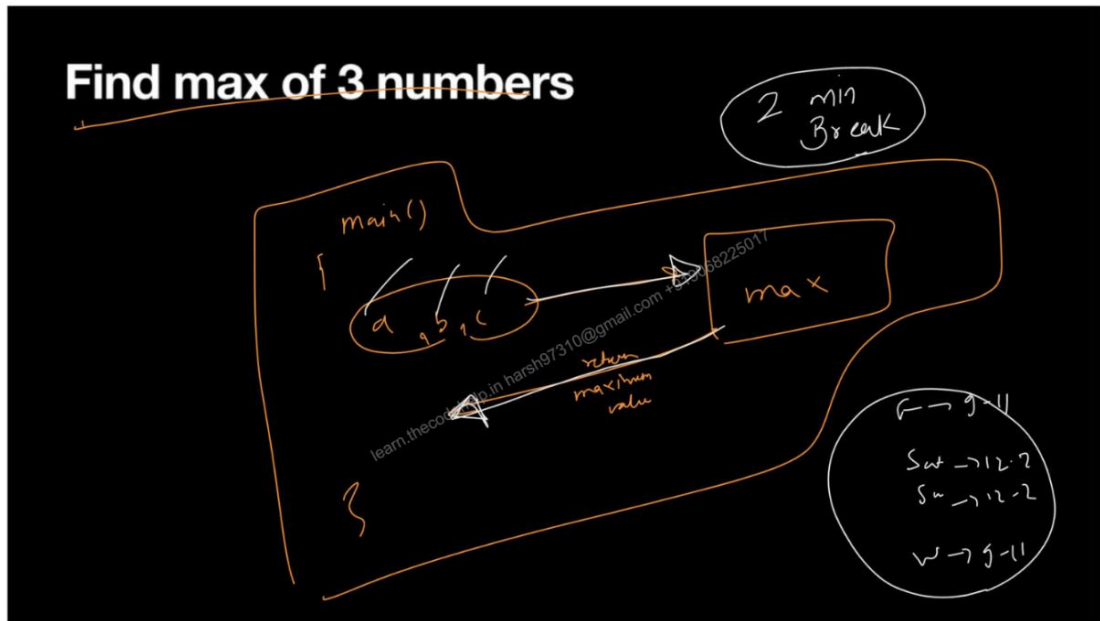


Write a Function to add 2 numbers.

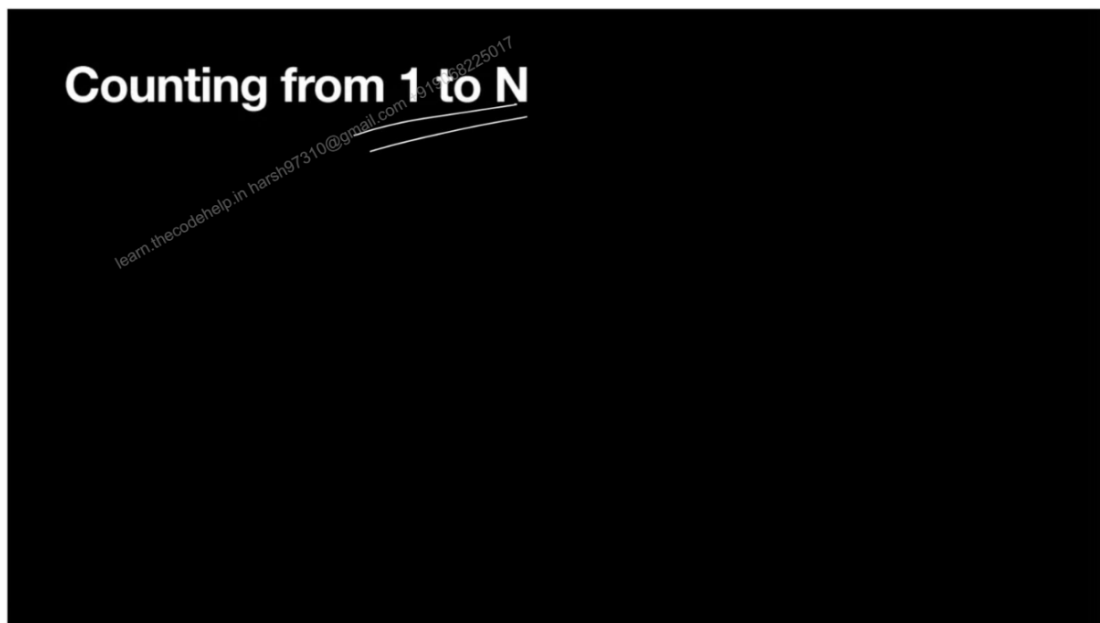




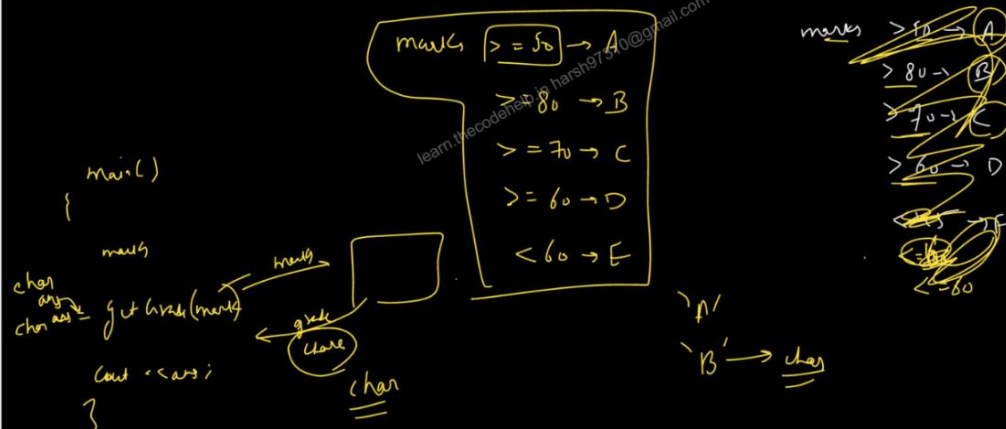
Find max of 3 numbers



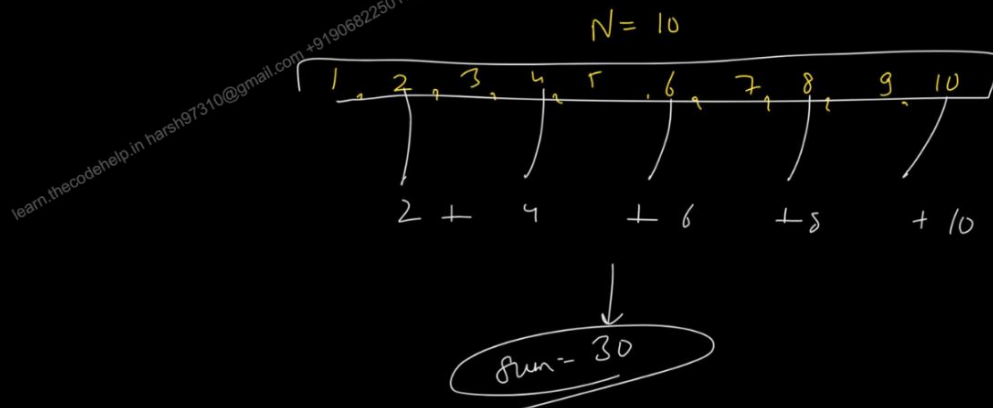
Counting from 1 to N



Write a Function of Students & Grade Problem



Sum of Even no. upto N



$sum = 0$
 $for (int i = 1; i \leq 10; i++)$
 $\{$
 $sum = 0 + 1 + 2 + 3 + 4 + \dots + 10$
 $= 55$

$i = 1$
 $i = 2$
 $i = 3$
 $i = 4$
 $i = 5$
 $i = 6$
 $i = 7$
 $i = 8$
 $i = 9$
 $i = 10$
 $i = 11$

$sum = 0$
 $i = 2$
 $sum = 0 + 2 = 2$
 $i = 2 + 2 = 4$
 $4 \leq 10 \rightarrow T$
 $sum = 2 + 4 = 6$
 $i = 4 + 2 = 6$
 $6 \leq 10 \rightarrow T$
 $sum = 6 + 6 = 12$
 $i = 6 + 2 = 8$
 $8 \leq 10 \rightarrow T$
 $sum = 12 + 8 = 20$
 $i = 8 + 2 = 10$
 $10 \leq 10 \rightarrow T$
 $sum = 20 + 10 = 30$
 $i = 10 + 2 = 12$
 $12 \leq 10 \rightarrow F$

$for (i = 2; i \leq 10; i = i + 2)$
 $\{$
 $sum = sum + i$
 $\}$

HomeWork:

- ✓ Write a function to display area of Circle $\rightarrow \pi r^2$
 - ✓ Find number is Even or Odd $\rightarrow \frac{n}{2} \rightarrow 0$
 - ✓ Find factorial of a number $\rightarrow n! \rightarrow 13 \rightarrow 1-13$
 - ✓ Check. Number is prime or not $\rightarrow \text{Yes or No}$
 - ✓ Print all prime number from 1 to N
-

$$3! = 3 \times 2 \times 1 = 6$$

$$5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$$

Problem Solving starts:

- ✓ Print all digits in an Integer
- ✓ Create a number using digits.
- ✓ Print number of set bits.
- ✓ Print binary equivalent of a Decimal Number
- ✓ Convert distance in KM to MILES

class work

Problem Solving HomeWork:

- Reverse an Integer $\rightarrow 123 \rightarrow 321$
- Set ith bit \rightarrow has \rightarrow I bit \rightarrow
- Convert celsius to Fahrenheit $\rightarrow 1000 \rightarrow$

Homework

1001 \rightarrow 9

C \rightarrow F

$$F = \left(C \times \frac{9}{5} \right) + 32$$