

Sunday, 17
January 16

Crux

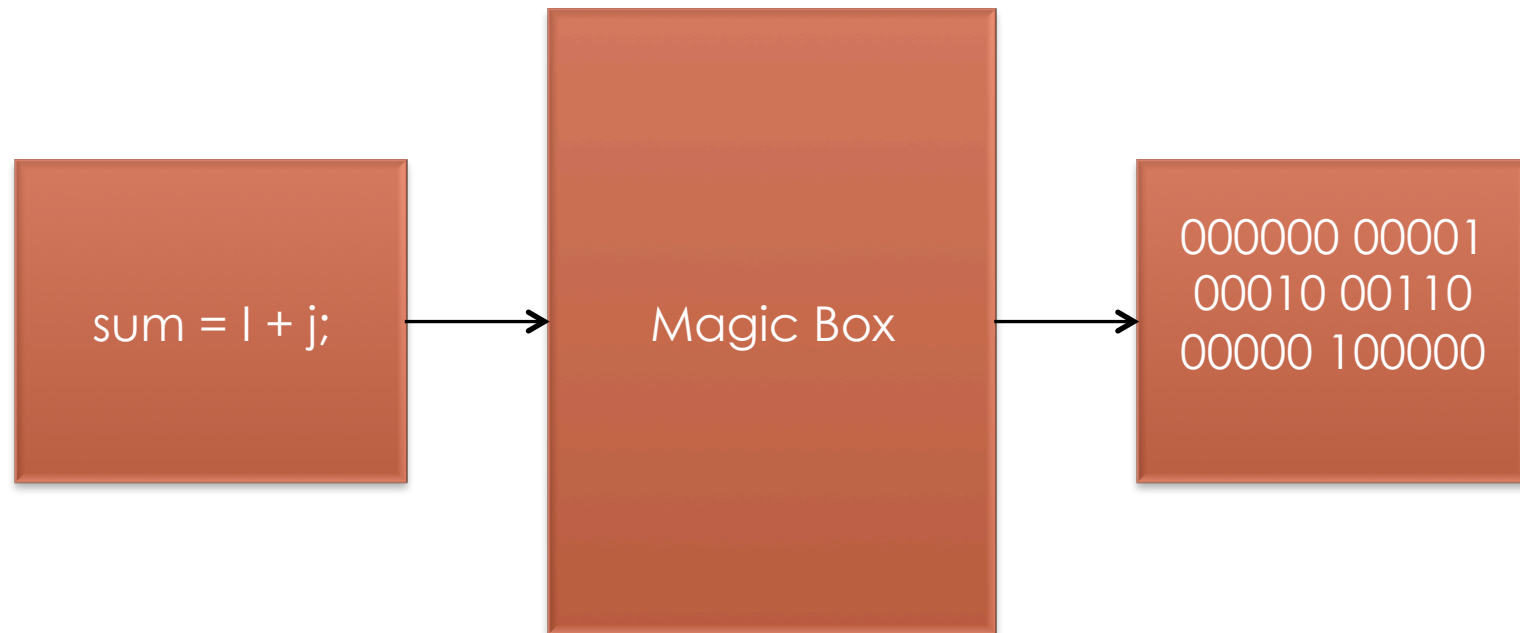
Lecture -2

Programming Fundamentals -1

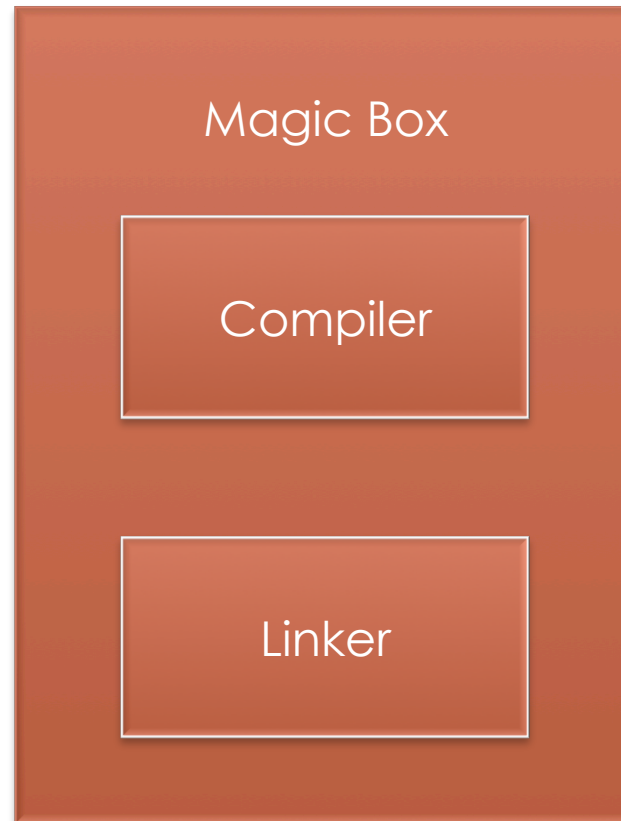
Manisha Khattar



How do we work with High Level?



Components of the Magic Box



Java Virtual Machine



BT – 5: Circular Jail Cell

There is a circular jail with 100 cells numbered 1-100. Each cell has an inmate and the door is locked. One night the jailor gets drunk and starts running around the jail in circles. In his first round he opens each door. In his second round he visits every 2nd door (2,4,6---) and shuts the door. In the 3rd round he visits every 3rd door (3,6,9---) and if the door is shut he opens it, if it is open he shuts it. This continues for 100 rounds (i.e. 4,8,12 ---; 5,10,15 ---; ---; 49,98 etc.) and exhausted the jailor falls down.

How many prisoners found their doors open after 100 rounds?

BT – Infinite Quarter Sequence

You are wearing a blindfold and thick gloves. An infinite number of quarters are laid out before you on a table of infinite area. Someone tells you that 20 of these quarters are tails and the rest are heads. He says that if you can split the quarters into 2 piles where the number of tails quarters is the same in both piles, then you win all of the quarters. You are allowed to move the quarters and to flip them over, but you can never tell what state a quarter is currently in (the blindfold prevents you from seeing, and the gloves prevent you from feeling which side is heads or tails). **How do you partition the quarters so that you can win them all?**

Any doubts on assignment?

Eclipse?

Time to write Hello World!



Print table of Fahrenheit to Celsius

Print the following table for Fahrenheit to Celsius using Formula $C = (5/9)(F - 32)$

0	-17
20	-6
40	4
60	15
80	26
100	37
120	48
140	60
160	71
180	82
200	93
220	104
240	115
260	126
280	137
300	148

Change Code to take User Input

Lets do these problems

- Find min and max out of 5 numbers
- Check if a number is prime
- Write code to print the following pattern

1

2 3

4 5 6

7 8 9 10

Time to Try?

- Print all Fibonacci number less than N
- Find all prime numbers between 2 to N
- Write code to print the following pattern

```
1
232
34543
4567654
567898765
```



Thank You !! 😊

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