INCEPTION

C++ Foundation & Data Structures

Lecture 4 : Programming Fundamentals 2

Tuesday, 28 May 2019

Any Doubts in Assignments

BT - 4: Criminal Cupbearers

An evil king has 1000 bottles of wine. A neighboring queen plots to kill the bad king, and sends a servant to poison the wine. The king's guards catch the servant after he has only poisoned one bottle. The guards don't know which bottle was poisoned, but they do know that the poison is so potent that even if it was diluted 1,000,000 times, it would still be fatal. Furthermore, the effects of the poison take one month to surface. The king decides he will get some of his prisoners in his vast dungeons to drink the wine. Rather than using 1000 prisoners each assigned to a particular bottle, this king knows that he needs to murder no more than 10 prisoners to figure out what bottle is poisoned, and will still be able to drink the rest of the wine in 1 month time. How does he pull this off ?

Data types Range

How are characters stored?

Break & Continue

For Loop

Scope of Variables

cin vs cin.get()

Lets do one more problem

- Write a code to count characters till you read a $

Time to try

- Write program to calculate digits, whitespace and other characters terminated by $

Print Following Patterns

- Given N (odd), Print for eg, N = 7

```
   *
  * *
 * * *
* * * *
 * * *
  * *
   *
```

- Given N, Print

```
55555
54444
54333
54322
54321
```

Print Following Patterns

- Given N, print following pattern (For N = 5)

  ABCDEEDCBA
  ABCDDCBA
  ABCCBA
  ABBA
  AA

In Logical Expression any Non-Zero value is true

Binary Operators

- Binary AND: &
- Binary OR: |
- Binary XOR: ^
- Binary One's Complement: ~
- Binary Left Shift: <<
- Binary Right Shift: >>

Precedence & Associativity

TABLE 2-1. PRECEDENCE AND ASSOCIATIVITY OF OPERATORS

OPERATORS	ASSOCIATIVITY
`()  []  ->  .`	left to right
`! ~ ++ -- + - * & (type) sizeof`	right to left
`*  /  %`	left to right
`+  -`	left to right
`<<  >>`	left to right
`<  <=  >  >=`	left to right
`==  !=`	left to right
`&`	left to right
`^`	left to right
`¦`	left to right
`&&`	left to right
`¦¦`	left to right
`?:`	right to left
`= += -= *= /= %= &= ^= ¦= <<= >>=`	right to left
`,`	left to right

THANK YOU

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