**Source : Geek4Geeks**

**Machine Coding Round: (1 hour)**

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**Implement a finite state machine.**

**– The machine should have one start state and can have multiple end states**

**– It should be extensible (I should be able to add any number of states or transitions at any time)**

**– I should be able to set notifications on or off for any state or for the whole state machine**

**Design: (1 hour)**

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**Implement Bidding system in Flipkart’s website**

**Algos: (1.5 hours)**

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**1) There is one meeting room in Flipkart. There are n meetings in the form of (s(i),f(i)) where s(i) is start time of meeting i and f(i) is finish time of meeting i**

**What is the maximum number of meetings that can be accommodated in the meeting room ?**

**2) Given a number line from -infinity to +infinity. You start at 0 and can go either to the left or to the right. The condition is that in i-th move, you take i steps.**

**a) Find if you can reach a given number x**

**b) Find the most optimal way to reach a given number x, if we can indeed reach it**

**3) Given a string s1 and another string s2, what is the smallest substring in s1 that contains all the characters of s2 ? (most efficient solution)**

**4) Given a string s1 from a dictionary and a string s2 from a dictionary, find the minimum number of steps to transform s1 to s2 under the following conditions:**

**– You can change the implementaion of dictionary**

**– Every transformation should belong to the dictionary**

**– You are given a O(1) library function F(s1,s2) which returns True or False for the query ‘can s2 be obtained from s1 with a single transformation’**