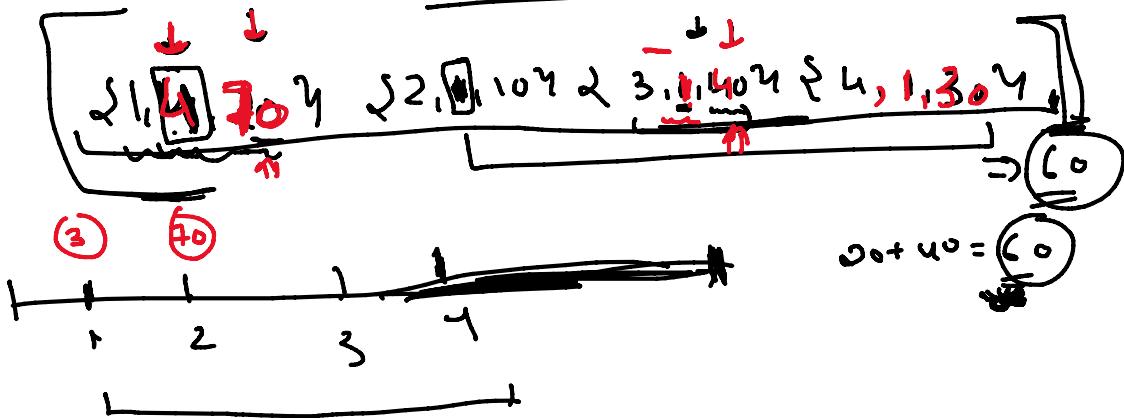
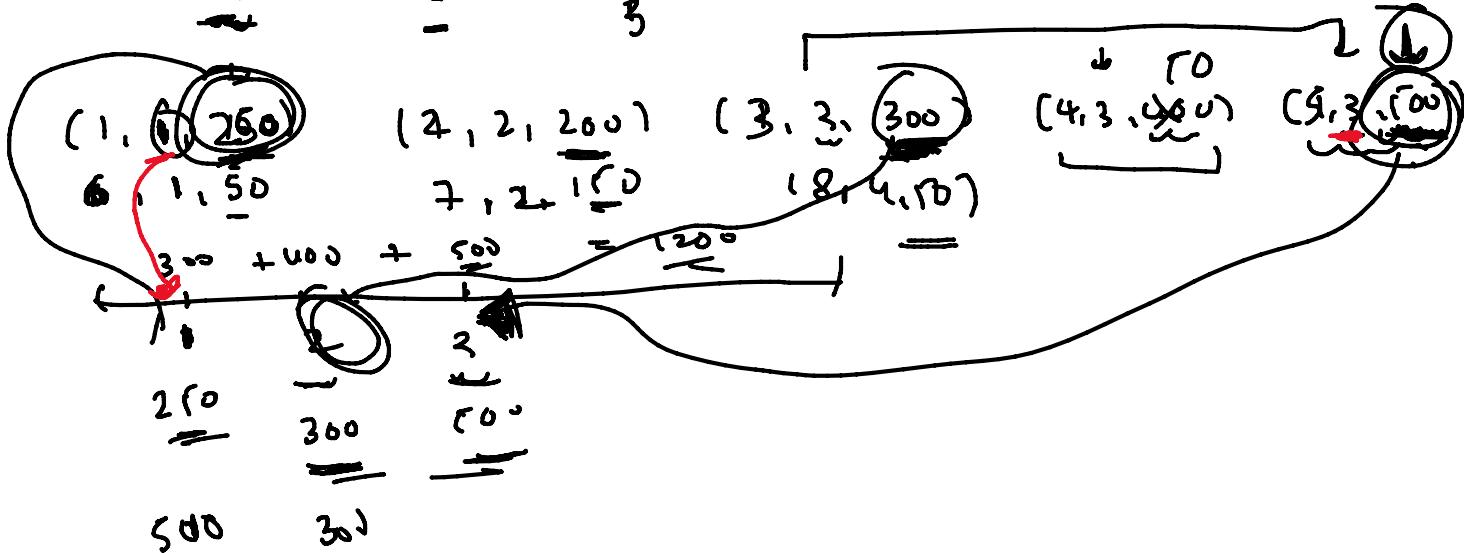
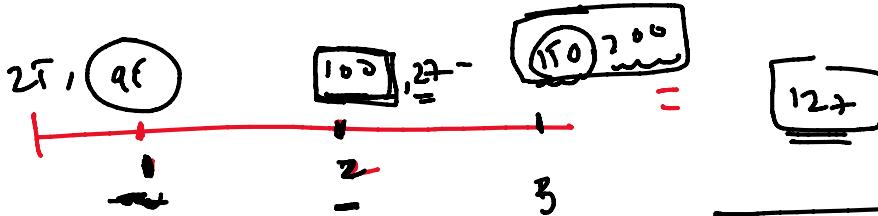
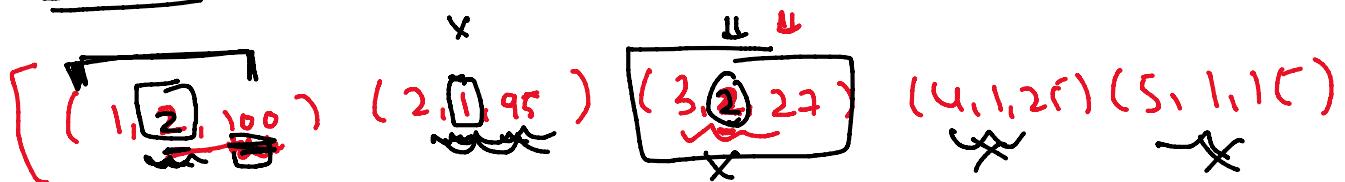
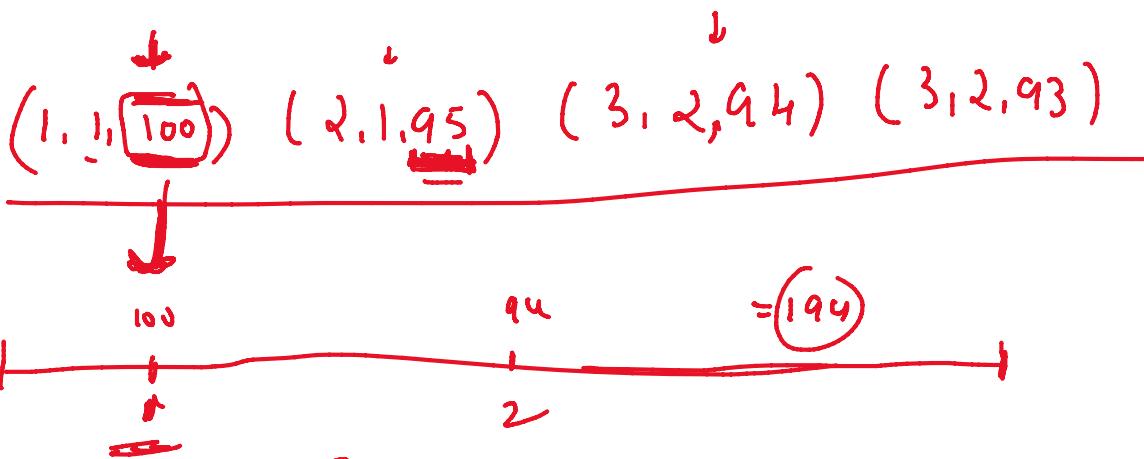


Class 64GreedyJob sequencing Problem

Main Job - ?      Main Profit      Optimize





[Profit, No of jobs]

vector<int> JobScheduling ( Job arr[ ], int n )

{

    Sort ( arr , arr+n , cmp );

    int maxi = arr[0].dead;

    for ( i= 1 ; i < n ; i++ )

        maxi = max ( maxi , arr[i].dead );

    int slot [maxi+1];

O(n)

    For ( i= 0 ; cc = maxi ; i++ )

        slot(i) = -1;

    int countJobs=0;

    int profit = 0;

    for ( i= 0 ; i < n ; i++ )

        For ( f = arr[i].dead ; f >= 0 ; f-- )

    ⑩

↳ if (slot<sub>i</sub>) == -1  
 ↳ slot<sub>i</sub> = 1;  
 countjob++;  
 Profit += arr[i] \* Prof.t;  
 break;

bool cmp ( Job a, Job b )

↳ return  $a \cdot \text{Profit} \geq b \cdot \text{Profit}$ ; false  
 ↳ (1, 1, 100)      (2, 1, 95)      (3, 2, 95)      (4, 2, 94)



loop invariant

Find minimum Number of coins

↳ VPS      150  
 $\Rightarrow [1, 2, 5, 10, 20, 50, 100, 500, 1000]$

$$450 \Rightarrow 100 \times 4 + 50 \times 1$$

$$(450) \Rightarrow \underbrace{100+4+50+1}$$

(n)

vector<int> coins; int n; int totalcoins = 0;

sort (coins.begin(), coins.end());

for (i=n-1; i >= 0; i--)

{ while (n >= coins[i])

{ n -= coins[i]; }

totalcoins += 1;

dp

n / coins[i]

m

while (n)

{ int coin = lower\_bound (n);

int year = n / coin;

n -= coin \* year;

totalcoins += year;

450

100

450 450

450 100

450 - = 450 - 100

100

Jump Game

Buy and Sell Stocks II

2

3

1

3

2

Jump Game

[2, 3, 1, 4]

$m^* = 2$

1

0 - 2

n-1

int  $m^* = \underline{\text{num}[0]}$ ;

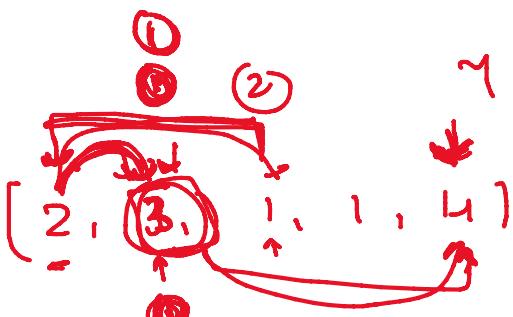
for ( $i=1$ ;  $i < n$ ;  $i++$ )

if ( $\underline{i} > m^*$ ) return false;

$m^* = \underline{\max(m^*, \text{num}[i] + i)}$ ;

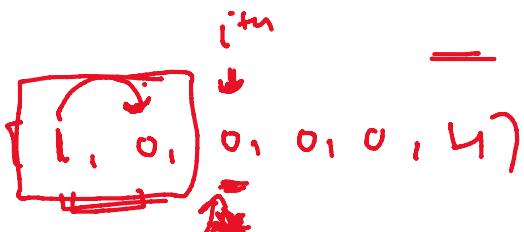
if ( $\underline{m^*} \geq \underline{n-1}$ )

return true;

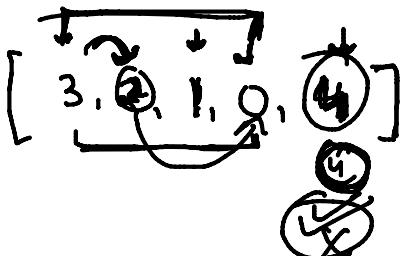


[3, 3, 1, 0, 4],

$m^* = 2$



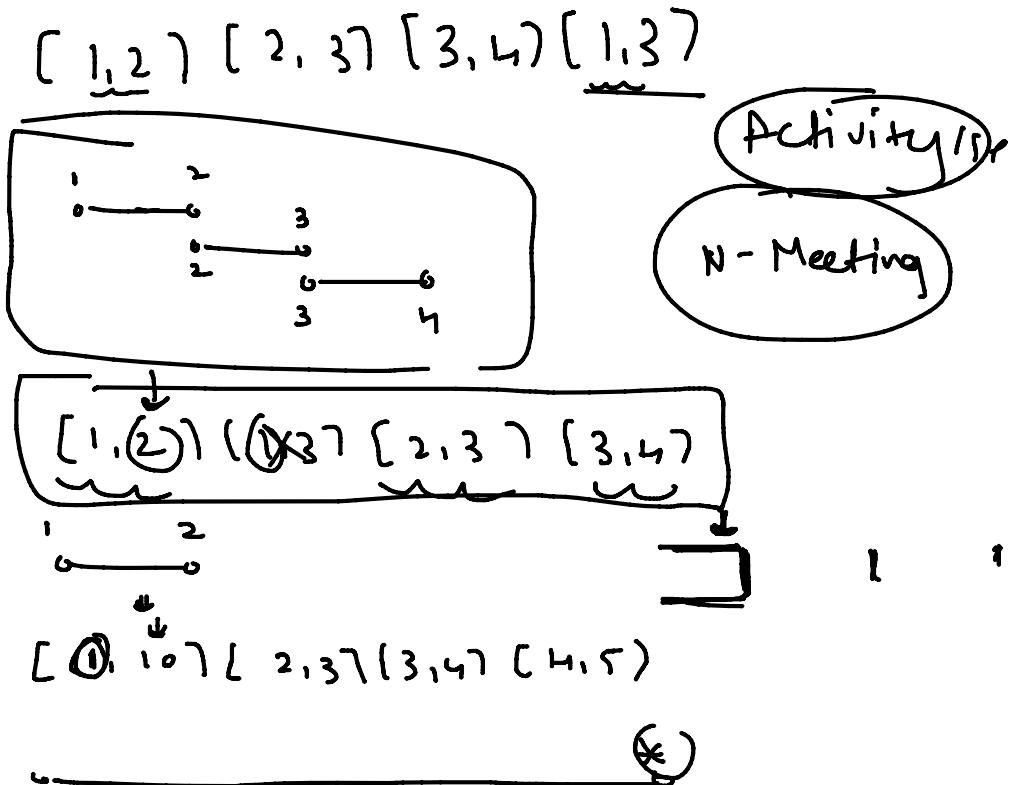
0 - i-1



false

$m^* = 3$

[1, 2] [2, 3] [3, 4] [1, 3]



Sort('intervals.begin()', 'intervals.end()', cmp);

```

vector<int> lmt = interval(0);
int ans = 0;
for (i=1; i<n; i++)
  if (intervals[i][0] < lmt[1])
    {
      ans++;
      lmt = intervals[i];
    }
  else
    lmt = intervals[i];
  -->
  
```