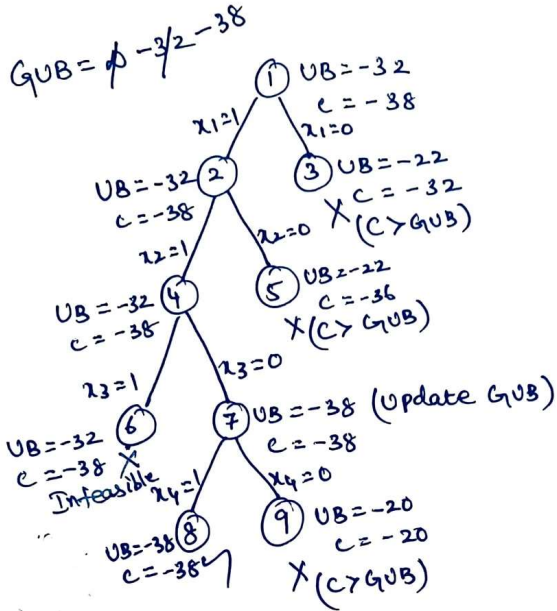


Least Cost (LC) B&B

0-1 Knapsack Problem:

Item	1	2	3	4
Profit	10	10	12	18
weight	2	4	6	9



Solution: $x_1 = 1 \quad x_2 = 1 \quad x_3 = 0 \quad x_4 = 1$

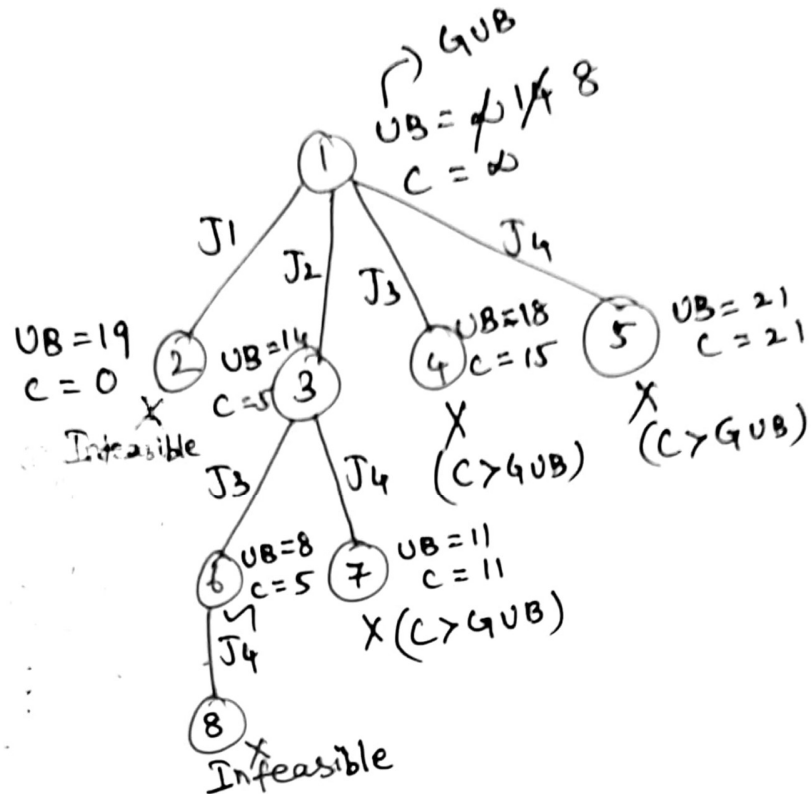
Items selected = $\{1, 2, 4\}$

Profit earned = $10 + 10 + 18 = 38$

Weight added = $2 + 4 + 9 = 15$

Job Selection Problem:

Job (i)	1	2	3	4
penalty (p _i)	5	10	6	3
Deadline (d _i)	1	3	2	1
time (t _i)	1	2	1	1



Valid path for job selection = Node 6 (least UB) $\rightarrow UB = GUB$

Jobs done = J2, J3 $\Rightarrow 10 + 6 = 16$ (Profit)

Jobs not done = J1, J4 $\Rightarrow 5 + 3 = 8$ (penalty)