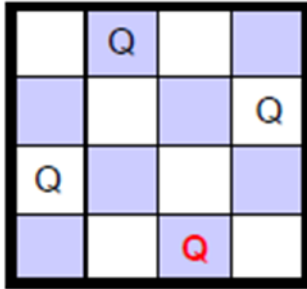


# Tutorial 5

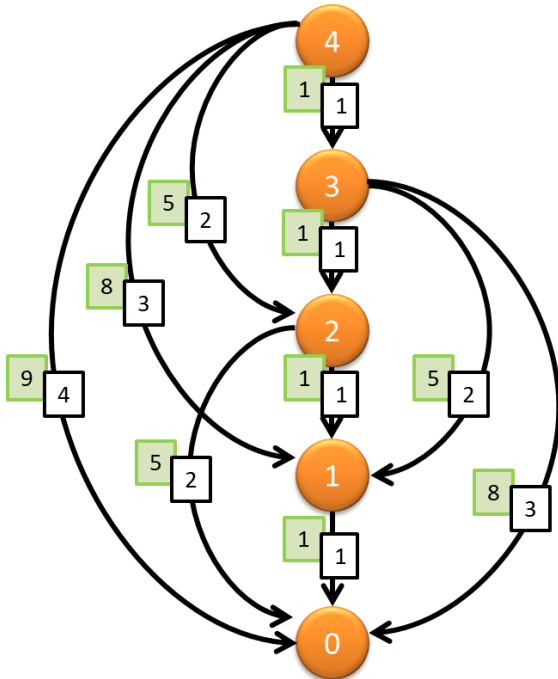
## Question 1:

Using the n-Queens problem we have discussed in class, try to find a backtracking solution if  $n=6$ . Clearly indicate the backtracking points.



## Question 2:

Using the Rod-cutting Problem we have discussed in class for dynamic programming, try to draw a similar tree for a rod with 5m in length and determine the optimal solution.



## Question 3:

Suppose there are  $n$  meeting requests and each meeting has a start time and an end time (st, et). No two meetings can take place if the meeting intervals overlap. The goal of your algorithm is to schedule as many meetings as possible. Example: (1,3) (2,4) (4,6) (3,8) (7,8), (3,4) The meetings scheduled will be (1,3) (3,4) (4,6) (7,8)

Design an algorithm that prints out the meeting numbers that will be scheduled. The inputs are: meeting\_number, start\_times and end\_times. In the example above, it will be: meeting\_number = [0,1,2,3,4,5] start\_times = [1,2,4,3,7,3] end\_times = [3,4,6,8,8,4] Output is 0, 5, 2, 4