N- Queens Exp No : 1 1. N- Queens Problem Using Backtracking in def 1852fe (board, row, wor, n): python. Aim: - Write a program to solve N-Queens problem with python code. olde Frent Jalle Algorithm: for (1-, 1-, wor) = pmor) gis ai i i vob i) Start ii) Placing empty space - Create an NXN board filled. iii) call check it placing Queen is safe. No Queen, is in the Same tow. No Other is in the Same diagonal. No other queen is in the same lower diagonal. iv) If a safe position is found, place the queen ('i') and move to next column. using reculsion. v) If all Queen are Successfully placed the algorithm, return True, offully placed the Blution is bound. Indicating that the vi) If placing the Queen is the auxent Column does not lead to solution Agonthm Backtlacks to the previous Column and tries mext row. def solve No (n):

board = [[0] \* 10 for - in ronge (n)]

it do live into OHI (board, a a) = delice:

print ("Solution dues mot centers")

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```
Program: int & see your meldod snow
 def issafe (board, row, w/n):
   for i in range (col):
     Jeturn False
 dor ij in Zip (range (row, -1, -1) range
  ochen False prisold ti does de
 for is in zip (range (now, n, -1) range
   lif board Cij [j] == 1.
    detran True
  def solve NO Util (board, col, n):
  if color=n: even bono (1,1) no
      Jeturn Tous noisluse pridu
   for i fin range (n).
 bon-1 non Col-h):
     board [i] [co]]=1
   if she No util (board, col +1, n) == True
    return True
                 Horthm Back Hack
     board Ci J [w] J=000 board on
  Jetum False
  def solve No (n):
     board = [[o]* n for -in range (n)]
     it blue NOUTI (board, 0, 1) == delse:
      print ("Solution does not exists")
    Xturn False
```

for i in board: print (i] ochum Tome dept titale tomoralami of n = int (input ("enter n value: ")
dolne NO(n) is postible before bocktracking Output: :matroplAv Enter n value: 5 [0,0,0,0] tilo loso, 1,000 of milet and of the Land of to feet troude of vi [0,1,0,0,0] ii) Rush the starting node [0,0,0,0,1] to [0,0] the took of 10,0,0] Result: dabte At mood about Jet At 909 (v vii) For lack adjacent unvinted neighbour with Mark the new glabour as visited xi) Push the unwishted reighteur unt the Stack. en show that all sectable to spel (ix des (xi

Depth First Scarch

Exp No:2