Engr. no Date . odes daur dijubi modernes ou : 1 gods in standard Aim TO write a python program to solve n-auch in problem was needed as down Algorithm Step 1: Initialize a board is create an NXN chersboard initialized with all yero ('O'). It indicates no gueen placed on that all step 2. Place queens column by column i) Stark with the first column is try placing queen in each now of the current column Step 3: check is placing queen is safe i) NO queens is in the same now 11) NO others is in the same upper diagnol iii , No other queen is in the same lower diagnol. Step 4: Recursion is It a safe position is bound, place the obusen (11') and move to next column using recursion step 5: Base case i) It all queens are successfully placed the algorithm sighwins 'True' indicating that the solution is bound Step 6: Backbrack i) I's placing the gueen in the woven column does not lead to solution algorithm

N-Queens of Problems of

hackbracks to the previous column and trights next now 4000 Step 7: NO solution I've algorithm enchances all possibilities and no placement works selwin False indications that no solution prints for given in - Try Kingson DEPORT INTERIOR Designed on the Businster smooth 27.(01)/3/201 200 5 makes an Horstill months by house but fraid by simular series / paper stifey sends (1) A se wak was in accept of the so had month Stop / 5: charles / 16 showing consider 13 sages is at supply is in the bornes have 200754 Jahra 120 N. 8/2992 49 sould mark with the sound of the pilosen is bound. phase the project surprise species Should help the Alecad A way brewishi Eduction Dy Hopareus day in Kalad sen sest unnusus inchisado nessuras es

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Program
     is-sale (board, from, col, N):
deb
     for it in sange [colz : 194 Times
       is board [row][i] = = 1 in moderate?
          return false
      bor i, j in zip (range (row, -1, -1), runge
        (col, -1, -1):
                      000/0300
         is board rististing broad is
           return balse 0000 000
     for i, j in zip (sunge (sow, N, 1), stange (col, -1, -1)):
       of o sitting broad his
          return balse
        return salse true
     deb solve-n_queens (board, col, N);
        is col 7=N:
            rekurn true
         for i in range (N)
           is is-safe (board, i, col, N);
             board[i] [col] = 1
            is solve_n_queens(board, col+1, N):
               return true
            60ard [i] [col] = 0
         Jeturn bales
     deb grint_board (board, N).
         bor now in board:
           Print (" " join (Str (ull) for all in row))
     N= int (input) ("Enter the size of board(N):"))
        board = [[07 x N bor in range [N]]
     is solve N - queens (board, O, N).
        Print (" solution bound:")
         Print-board (board, N) Dougles
      else
         Paint ("NO solution exists')
```

morball. output: (1/2) were file week week - 80 1 file Enter the size of the board (N):8 Solution bound DI Durant Bready 35 00001000 :(1-1-1-1803) 0000.9000) JEST DORORS SÚ 0 0 1 0 0:00 0 0 TENT LOWDER & S Aluka Bolse Pelana Kilk thus : (4, Sex, Sprood) enemp. 11- swill - Job : 0 = = 100 09 Selven Duis connections is self TO BE HOUSE CHOOSE IN STREET 1 - Flow I Followied (11/10) to 2004) REELIP IN OURSE 25 Frakussy Frank DE EXOT ENT BROOK Jake - Marke our observat) located - finished del Print (" : join (stricais) bor all in a Jak edim "Data god) dai eu Result Thus the N-Queen groblem is executed and output is suches bully werified. (of Sheeper) were of I show of PERIOD (" NO SERVICE