Forward Chaining:

As per the law, it is a come for an American to sell weapons to hospile nations. Country A, an enemy of America, has some missily and all the missiles were sold to it by Robert, who is an Problem Statement: American citizen.

1) It is a crime for an American to sell weapons to hostile nations American (p) A weapon (q) A seus (p, q, 2) A Hoskle (21) => Criminal (p) p, q, on are vanisher

Do country A has some mussiles 3x (owns (A, 7) 1 Missile (7))

(3) All of missiles were sold to country A by Robert ∀x(Missile (x) / owns (A, x) => Sells (Robert, x, A))

Missles one weapons Missile (2) => meapon (2)

Stremy of America is known as hostile Yx (Enemy(x, America) => Hostile (x)

(Robert is an American American (Robert)

The country A, an enemy of America Enemy (A, America)

· Observation ?

-> From (3 & P), we can say that A is enemy of America and hence it is a hostile of America (Hostile (A))

of From @ & F), wornly A has some misseles & missele are peopons, so country & has so weapons (weapons (2))

From 3 & 4 , Missile (2) & Owns (A, X) =) Sells (Robert, X, A) All Missiles, which ere neepons, nove sold to country A by Robert. - considering statement (), American (Robert) 1 weafron (9) 1 sells (Robert, 2, A) 1 Horne (A) from mis, me con deduce men 11 is a come for Robert to sell weapons to A 80 Robert B a cominal = criminal (Robert) il pour [i)[i] = Empri desperon no or o score enimeral food, o, tolie) Output: nonvery Robert 18 a criminal done! popus = [][] brooks 90012 = 80012 - 189010 (in) - more 1 55 moderny = Felse Sylver move Comment work KOM Section det minmax (board, defille, is noutrained). of check (board . 63): gradien 10 depth of provincing with of check (Good, Hueson): subser depth to 11 delongs has 1 K- more misseng? 00 - x 08000 - 1990 to of tel mod a min non (book diglib + 1, 10 (se) board[][i] & enty Hunds SONT - Store - work (East Store, swis) State Deed State June 7

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Min-Max For TreTac Toe: Numar-O
                                         Man Marchalowant (1)
Algorithm:
 del find best mare (board) ios) viselle (to accomo to (trades) morange
    more = (-1, -1)
Hown terk is to iterate over empty cells & place X in the cell
     for ist to 3:
        for j=1 to 3:
              in board [i][i]= = emply
                                                     ne're mying !
                     board [i][j] = X
                     score = minmox (board, o, Felle) -
                                                     Human to win
                     board [i][I] = emply londo lenimino a el trada
                     if score > best score :
                          best _score = score
                          more = (i,j)
                                                 B 75-mondrang = False
    John move
des minmaz (board, depth, is -moximizing):
    if check (board, AI): grehm 10-depth // prioritizing win
    1) check (board, Human): grehim depth -10 /1 delayor loss
    is - mounizing.
            best - score = -00
            for 1=1 to 3:
                for jo1 to 3:
                     1 board [:][j] == Empty:
Umore
                          score « non non Choad, depth +1, Folse)
                          board[7[i]=enty llundo
                           best-score = mox (best-score, score)
           relim best-score
  elle:
        Town
        min
        rehm best_score
```

```
output:
    Cornert Board:
    XOX
    00 X
   The best more for AI is (2,2)
nim d- & fruning for 8 greens problem:
   del appla-belo (sell, boord, col, alpho, beta, moximising-player):
                                                      - rolled soln is found.
      if col > = self. size :
           grehero O, [now [:] for now in board]
                                                           - Herofes Mrough
      if mountaing player:
                                               gove
                                                             each cold ?
          mox-eval = -00
                                                            placing a green
          best-bond = None
           for now in gange (sey size):
                                                            is safe.
                  1) self. 12-20/6 (poord 2000,001):
                      eval - s core, pot -board = alpla -belo (board. co1+1, ad, p, Folie)
                      board [grow] [w] = D
                      1) eval- 9 core ymon :
                           mox = eval-score
                          best bord = pot board
                          alpha = nor (elpha, ceval_score)
                      of beta < = alpha: # Beta cutoll,
                           break
            Jehm wox-eval, best-band
                                         // minimining score
    elves
        Torre
   helar min()
        VI
                             # alpha cutoff
         bere cz alpha .
        stetum min-end, best-board
```

output: Solution found 0 0 0 for 8 guerns proble del appra-pera (sell, poord, col, alpho, peta, mosimus · Mos belov c [brood nimore rof [: Torde], O evolute [co1 > 2 self-size : Unoximizes sold disturbant ! bout = bood - tesd soff is soft (food) mon cold: end - s cor , pot bood = offle belo (bood tot, mes 2 - love brood forf = bood - 120 (word love sold some explo John oros 17 . . . olylo - > stad f. server wor end, box hand couls. BUNCI John will Hope or to to - silve es alle kneed ted loss airs willist