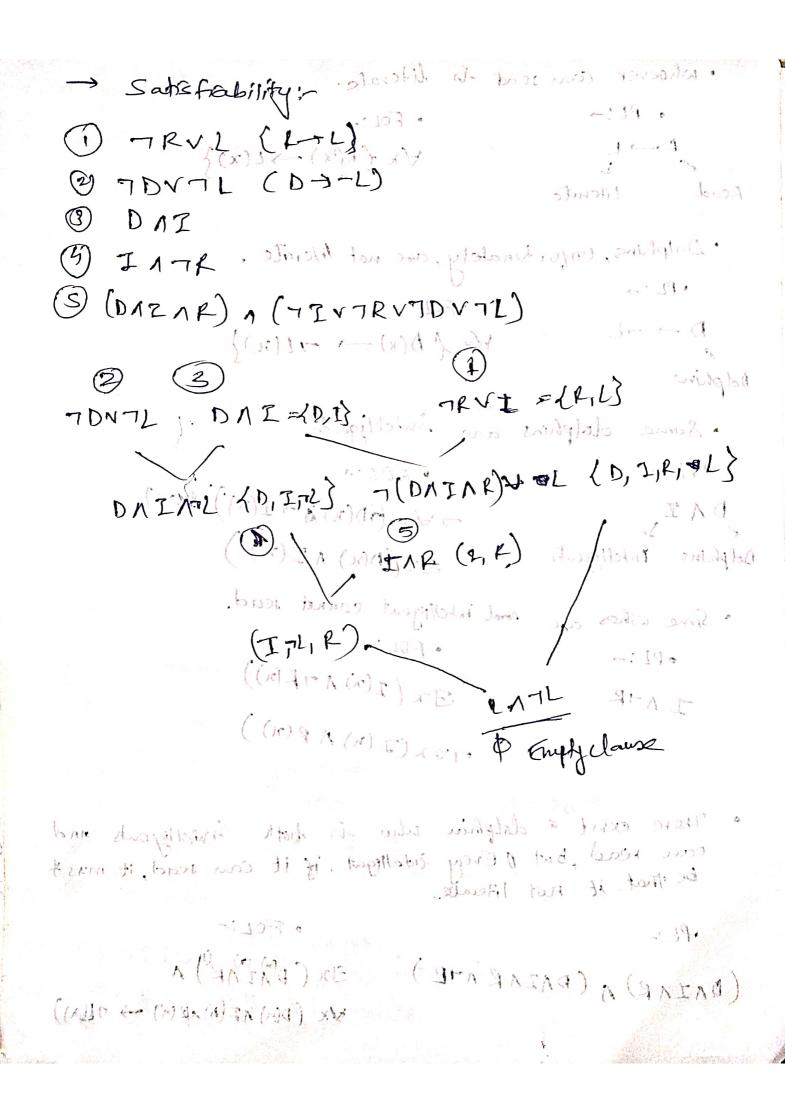
OC BRICAL ASSIGNMENT ( COC DE) 1100 & wastania Let Suppose: (Jo, 1) 311 at home to gettown light glaw - yt at time to red light glaw - rt At any given manent, the traffic light is eight seight of eight of gtvyt vrt The Haffir light switches from grain to yollow to It ((gt nytti) v (yt notti) v (rt ngt+i)) sed, red to green. - (gt - yt+1) v (yt - st+1) (st - gt+1). · The traffic light cannot remains in the same State for more than 3 consecutive oycles: - (gt A gt+1 n gt+2) v (gt nyt+1 nyt+2) V (H NH+1) H-+2) RCM) - Read, oc 1 (m) - 81 is life about DOD - x is Dolphin

Tropilotal (12 x - (11) E

con(24, 22) - 194 carnets with 2/2 NC(x,cl) - n has color cl 1. VHXEN, {x,, x2}eN, {C,, C2}EE - {N(2,)/N(2,)/N NG(24,G)/NC(22,G)/ 200 (24, 22) 20, 9 + (2) - con (24, x2) -> - (DC (24, 4) 1 NC (2, G)) IT  $(x_1!=x_2)$   $\Lambda$   $Nc(x_1, G)$   $\Lambda$   $Nc(x_2, G)$   $\Lambda(G==)$  Yellow')  $\Lambda$ (ZEN: NCEL, G) - (2== 7) 3. ∀x, ∈ N { Nc(x, G=r) → Nc(n2, C2=4) 1. Steps (21, 22) ≤4} 3 TAZEN ed, ned to great. (GHARNION (HERN JP) V (HIBN JB)) JE -4. (AC. E.C., & NC(2, c) ), (Halle B) . The trains light council recounts in the sains state for now stan 3 consending optos: guestion 3: Let's deprie statements! (H MIER HETZ) RM) - Read, or 1 (n) - n is literature D(n) - x n Dolphin I(N) - x is Melligent

· whoever com sead is literate.
• PL:→ • FoL:7
PL:->  FOL:-  Fol:-  Fx $f(x) \rightarrow L(x)$ Read Literate
Read Literate
· Dolphins, unfortunately, are not literate.
·PL:
D -> -L  Va (D(N) -> -1L(N))  Dolphins
Daphins :
· Some dolphus are intelligents.
{ J. IPL 14-0, 0 } Jon 16/2 0 FOL: 1
DAI - VX (D(N) A-I(N)) (COY)
Dolphins Intelligents (D(K) 15(K))
· Some who are not intelligent cannot read.
• (-0)
INTR JAN (2(m) 17 Km))
the form of the car (a) V K(w))
There exist a dolphin who is both invelligents on can read, but a Every intelligent, if it can read, it must be that it not literate.
oflin
(DNINR) N(DNINR NTR) BR(DMENRY) N

VX (DM) 17(N) ARM) -> 74M)



Computation: (n) (n.p Q.2 (a) Time Complexity Time Complexity Momory Usage wish bround initialize (Ni Vi) O(n+m) O(n+m) on -N m - no. q stops m - no. q soutes. in conflags by Lucktonel Chaning (MXM) add route 0(mxn) 0(M) data () my no. of routes. m- no. of routes. n- avg. stop/mb Tithe ? (b) foresont character (d) O(1)- 12 where syste between a property. quirg direct rowes() the trade many bridged in silf, raker. Bruto hun= Brute force: Is Heraile through each route Great is both stops exist in the route 6 verify the order of stops. but here one history FOL Approaches: G Create terms & Predictos 6 Add bath to knowledge base 4) Define relationship rules

-: nodobajono 8.3) (9) Space Complexity D Time Complainty forward (halwing 0(nxm2) (NI +10) (NI +10) M- noighbores m - ang. Stop/rowle. P-no.g. potentral
paths. backward Charming O(nxm) (MXM+G) Chalah duri 10th gris podry explain to following. (b) forward charing: · luitialize buardedge base with route data. · Generate Connected stops relationships (1) CARG ( ) Hour touth · Build paths forward from Start stop. · Going apply via stop (onstraints (b) Intomediate · Return paths, Fruit force: Back world chaining: to Heredo through each waiter · Same as above (forward chairing) but here we mores short - and wher than stant-send. FCL Appachess= 6 aross tens a predicted broad pain to knowledge board & Define rabitionship rules