First order Logic: turbac: 7 In propositional togic, we can only orepresent the facts, which are either True or False " eg: It is naining. > B at p It cannot represent the following statements.

eg: some qu'ils are intelligent.

eg: Mangoes are sweet. > First-order-logic is capable solo enprensing jouts about some orall mobilety. E No rot - 4 > FOL specifies objects, relations and

functions.

De Justin de also known as Predicate Logic (or) First order predicate Language.

isignal rubre hope Eyntan: predicate (tumi, tum 2., terms) ell tribupes As like they a god _ 7 girl (x) Predicate ? subject Quantifuis. universal E xistential Quantifier. auantifür . wors made tools 4 - For all 3- For sum. FOI Soprission objects, relations, and Eg! All employees. Eg! some students Yx emp(x), and (x) · reandure !

Elements of FOL: constant - 1,2, A, John, chennai, cat. variables - x, x, z, a, b, etc. Predicates - student (boy, girl). Function - volour-of (Basket) connectives - 1, v, 7, -7, => Equality = [= = = = =] and] and x y Quantifus - 7, F. Follow irample - (think) 17 n - · Anjoillatis en und and and ((n) for Ritar 1 (r) shot) xE TOT NOT me we that me. -7 - 4 ... Then. MEXICE AND only IF. to not oil standards like ton ..) Wil (That wi) will complished) (n) you a francis, r

1. Sam is Tall:

Tall (Sam).

2. John likes wicket:

likes (John, wicket).

3. Every one likes bicket:

Yx likes (cucket, x).

4. All students likes vicket.

∀x (student(x) -> like (x, vicket))

Prudivate (Subjed)

tidura

predicates

rinding

Consultive

5. Some boys are Intelligent.

Ix (boys (a) 1 Intelligent (a))

6. Some boys are even and some are protegers

Ix even (x) 1 Fx odd (x)

7. Not all estudents like both Mathe and Ellence.

TY (n) (estudent (n) -> like (n, Maths) 1 like 2, science)).