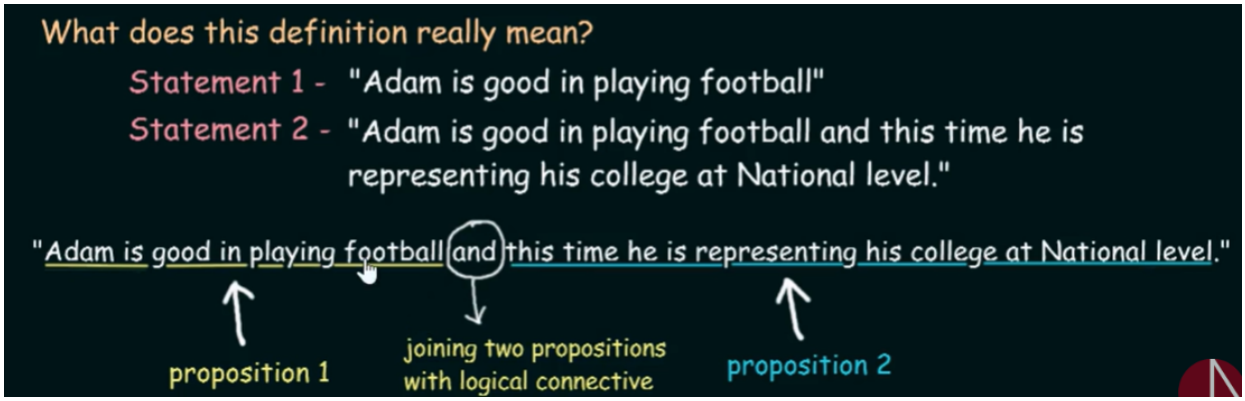
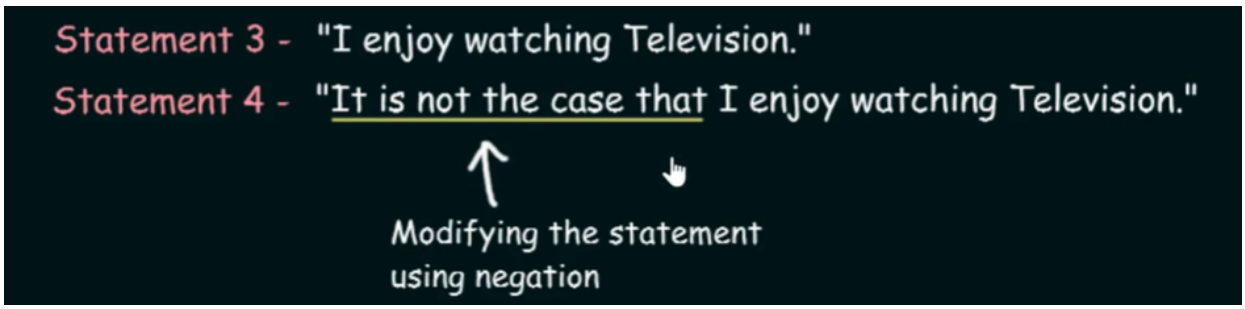
Lecture 3. Propositional logic, Propositional Variables and Compound Propositions(命题逻辑、命题变量和复合命题)

Propositional logic

area of logic that studies ways of joining and/or modifying propositions to form more complicated propositions and it also studies the logical relationships and properties derived from these combined/altered propositions (逻辑领域，研究连接和/或修改命题以形成更复杂命题的方法，并且还研究从这些组合/更改的命题导出的逻辑关系和属性)

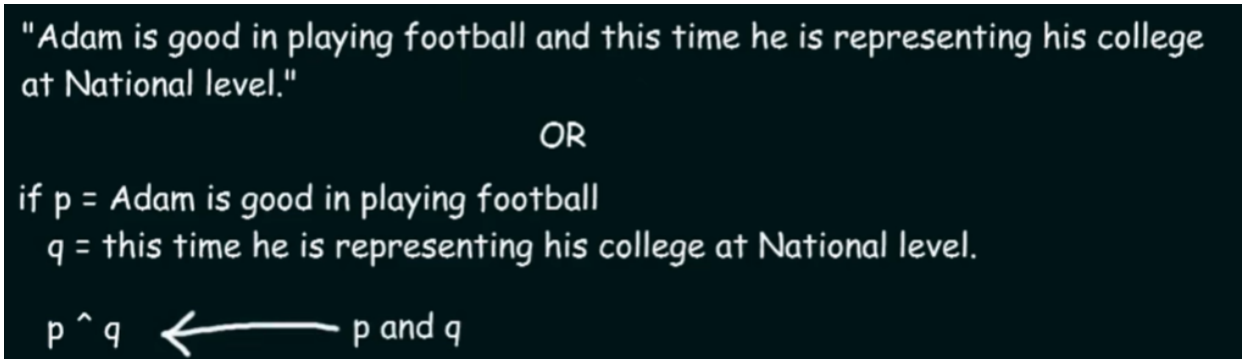




Fact: propositional logic is sometimes called as "sentential logic" or "statement logic"

Why do we need compound propositions?
Because most of the mathematical ststements are constructed by combining one or more than one propositions.

Propositional Variables



Definition: Variables that are used to represent propositions are called Propositions Variable.