Date :- 10th - Nov- 2022

Scribed Lecture Notes :-

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Regular Expressions

Regular Expressions are restricted expression of a word, it is compact way to design machine.

It has 2 categories :

1) base case :

1. Let R = ∅. Then R does not contain the symbol ∗ and L(R) = ∅, which is finite. So P(R) holds as wanted.
2. Let R = ϙ. Then R does not contain the symbol ∗ and L(R) = {ϙ}, which is finite. So P(R) holds as wanted.
3. Let R = c, where c ∈ Σ. Then R does not contain the symbol ∗ and L(R) = {c}, which is finite. So P(R) holds as wanted

2) Induction case :

a) (re1) . (re2) = concatenation
b) (re1) + (re2) = union
c) (re)* = Asterate

It is an associative regular expression.

A + a . (a + b + c +d) * . a

Conversion of regular expression to finite automata

{a,ac,c,bbc} ⊆ L (re1)
bbccaacbbc ⊆ L (re1)