

RGPV 2020

What are leftmost and rightmost derivations? Explain with suitable example ?

Grammar:

$S \rightarrow aS / \epsilon$

For generating strings 'aaa'.

Left most derivation:

A leftmost derivation is obtained by applying production to the leftmost variable in each step.

$S \rightarrow aS$

$\rightarrow aaS$ (Using $S \rightarrow aS$)

$\rightarrow aaaS$ (Using $S \rightarrow aS$)

$\rightarrow aaa\epsilon$

$\rightarrow aaa$

Right most derivation:

A rightmost derivation is obtained by applying production to the rightmost variable in each step.

$S \rightarrow aS$

$\rightarrow aaS$ (Using $S \rightarrow aS$)

$\rightarrow aaaS$ (Using $S \rightarrow aS$)

$\rightarrow aaa\epsilon$

$\rightarrow aaa$

Related Posts:

1. RGPV TOC What do you understand by DFA how to represent it
2. RGPV short note on automata
3. RGPV TOC properties of transition functions

4. RGPV TOC What is Trap state
5. CFL are not closed under intersection
6. NFA to DFA | RGPV TOC
7. Moore to Mealy | RGPV TOC PYQ
8. DFA accept even 0 and even 1 | RGPV TOC PYQ
9. Short note on automata | RGPV TOC PYQ
10. DFA ending with 00 start with 0 no epsilon | RGPV TOC PYQ
11. DFA ending with 101 | RGPV TOC PYQ
12. Construct DFA for a power n , $n \geq 0$ || RGPV TOC
13. Construct FA divisible by 3 | RGPV TOC PYQ
14. Construct DFA equivalent to NFA | RGPV TOC PYQ
15. RGPV Define Mealy and Moore Machine
16. RGPV TOC Short note on equivalent of DFA and NFA
17. RGPV notes Write short note on NDFA
18. CNF from $S \rightarrow aAD; A \rightarrow aB/bAB; B \rightarrow b, D \rightarrow d$.
19. NDFA accepting two consecutive a's or two consecutive b's.
20. Regular expression to CFG
21. Regular expression to Regular grammar
22. Grammar is ambiguous. $S \rightarrow aSbS|bSaS|\epsilon$
23. Construct Moore machine for Mealy machine
24. Definition of Deterministic Finite Automata
25. Notations for DFA
26. How do a DFA Process Strings?
27. DFA solved examples
28. Definition Non Deterministic Finite Automata
29. Moore machine
30. Mealy Machine

31. Regular Expression Examples
32. Regular expression
33. Arden's Law
34. NFA with ϵ -Moves
35. NFA with ϵ to DFA Indirect Method
36. Define Mealy and Moore Machine
37. What is Trap state ?
38. Equivalent of DFA and NFA
39. Properties of transition functions
40. Mealy to Moore Machine
41. Moore to Mealy machine
42. Difference between Mealy and Moore machine
43. Pushdown Automata
44. Remove ϵ transitions from NFA
45. TOC 1
46. Difference between Mealy and Moore machine
47. What is Regular Expression
48. What is Regular Set in TOC
49. DFA which accept 00 and 11 at the end of a string
50. DFA end with 1 contain 00 | RGPV TOC draw
51. RGPV TOC design finite automata problems
52. Minimization of DFA
53. Construct NFA without ϵ
54. RGPV TOC PYQs
55. Introduction to Automata Theory