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COMP 4200

Assignment 4

Text

Description automatically generated



Diagram

Description automatically generated

Text

Description automatically generated



Diagram, engineering drawing

Description automatically generated

Diagram

Description automatically generated

Remove State 5

* The new connection between 4 and 6 will be shown as (Ԑ b)

Remove State 9

* The new connection between 8 and 10 will be shown as (Ԑ a)

Remove State 4

* The connection between 3 and 6 will be shown as (a Ԑ b)

Remove State 8

* The connection between 7 and 10 will be shown as (b Ԑ a)

Remove State 3

* By removing state 3, the connection now reaches from 2 to 6 as (Ԑ a Ԑ b(concatenated))

Remove State 7

* By removing state 7, the connection now reaches from 2 to 10 as (Ԑ b Ԑ a(concatenated))

Remove State 2

* When removing state 2, the two other branches will be shown as looping back to 2 as (ab)\* and (ba)\* while dropping off the Ԑ as they are not needed.

Final step

* This is the final showing of the Regular Expression

(ab)\* U (ba)\*

Diagram

Description automatically generated

Remove State 14

* Removing this state will have the connection between 13 and 15 will be shown as (Ԑ b)

Remove State 7

* Removing this state will have the connection between 6 and 8 will be shown as (Ԑ a)

Remove State 13

* Removing this state will have the connection between 12 and 15 will be shown as (a Ԑ b)

Remove State 6

* Removing this state will have the connection between 5 and 8 will be shown as (a Ԑ a)

Remove State 12

* Removing this state will have the connection between 11 and 15 will be shown as (ab)\*

Remove State 5

* Removing this state will have the connection between 4 and 8 will be shown as (Ԑ a Ԑ a)

Remove State 11

* Removing this state will have the connection between 10 and 15 will be shown as (Ԑ(ab)\*)

Remove State 4

* Removing this state will have the connection between 3 and 8 will be shown as (aaa)\*

Remove State 10

* Removing this state will have the connection between 9 and 15 be shown as (b Ԑ (ab)\*)

Remove State 3

* Removing this state will have the connection between 2 and 8 be shown as (Ԑ (aaa)\*)

Remove State 9

* Removing this state will have the connection between 1 and 15 be shown as (Ԑ b (ab)\*)

Remove State 2

* Removing this state will have the connection between 1 and 8 be shown as (Ԑ (aaa)\*)
* This will now be added on this the state coalition on 9 to 15 and have a new expression of

((aaa)\* U (b (ab)\*)