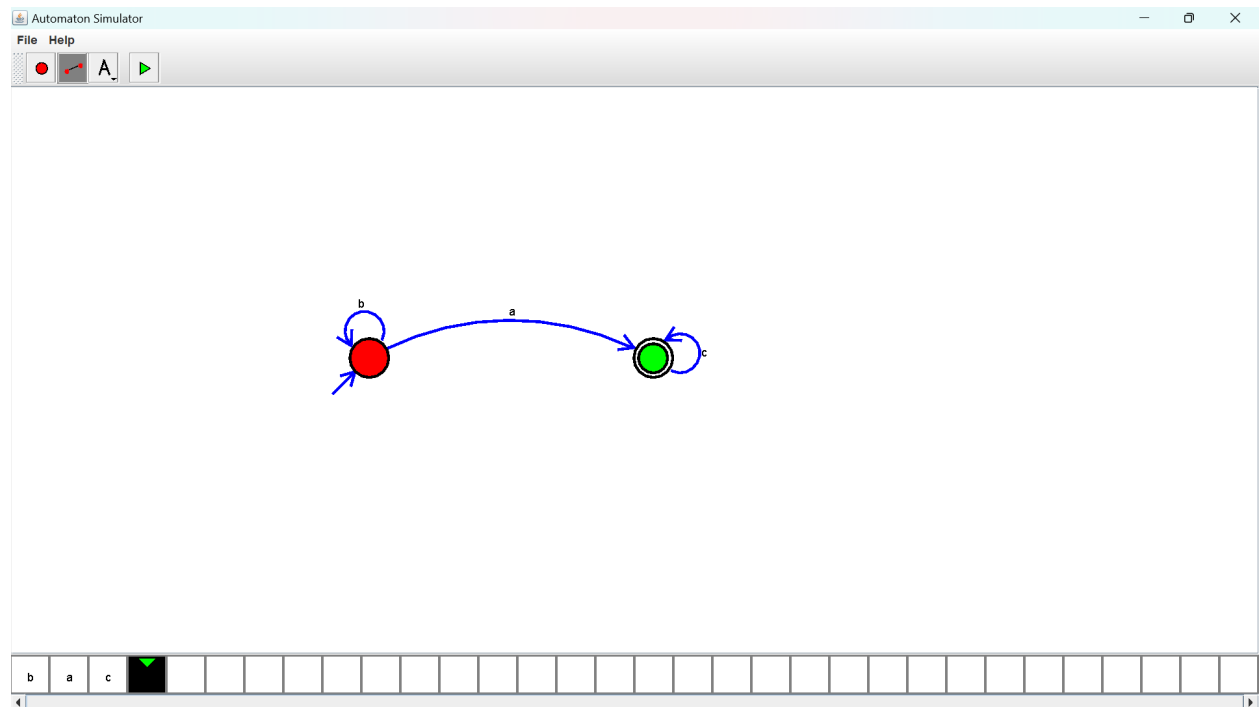


12 . Design DFA using a simulator to accept the input string “a” ,”ac”,and ”bac”.

**AIM:** To design DFA using a simulator to accept the input string “a” ,”ac”,and ”bac”.

**TRANSITION DIAGRAM:**

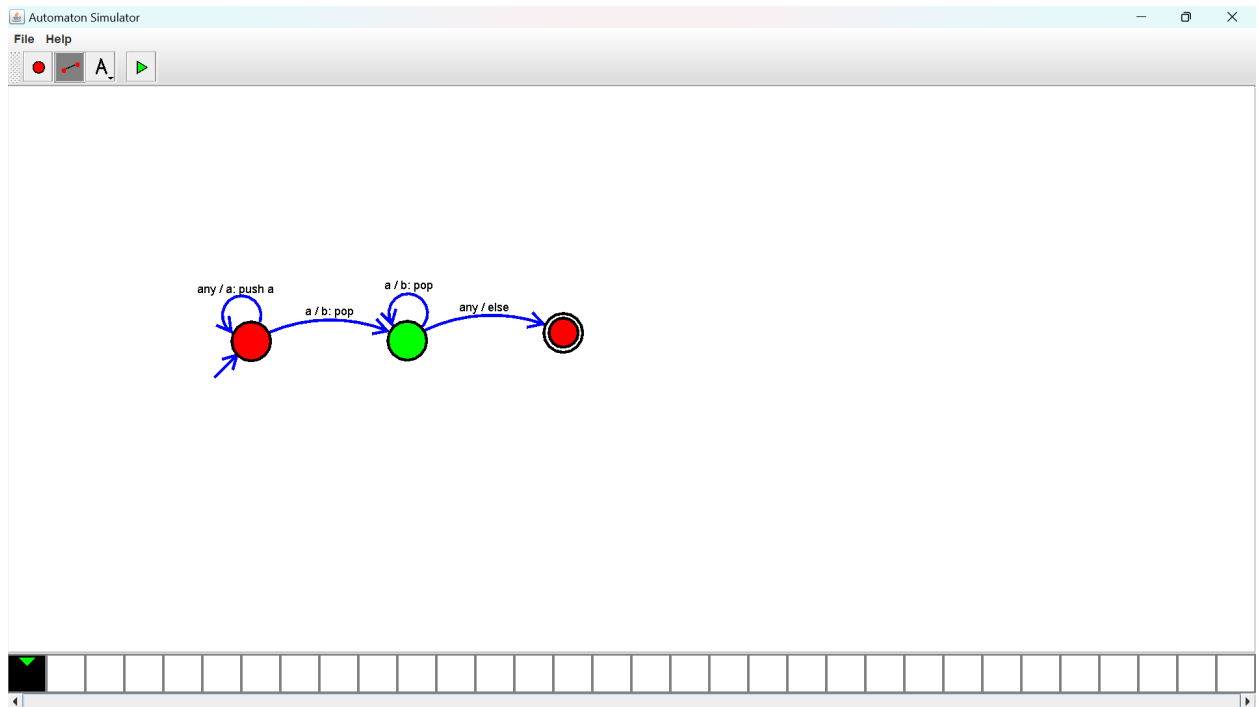


**RESULT:** All the given strings are satisfied.

**13. Design PDA using a simulator to accept the input string “aabb”.**

**AIM:** To design PDA using a simulator to accept the input string aabb.

**TRANSITION DIAGRAM:**

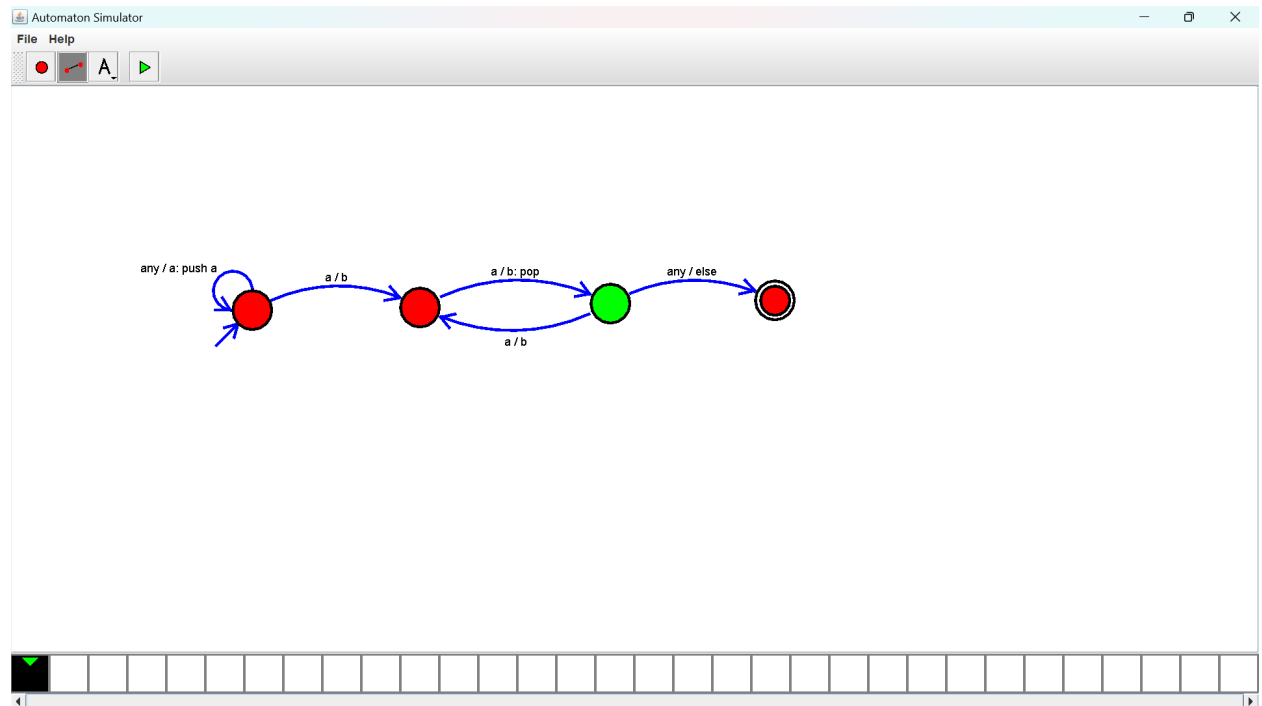


**RESULT:** The PDA is designed to compute the string given as input using a simulator.

#### 14. Design PDA using simulator to accept the input string $a^n b^{2n}$

**AIM:** To design PDA using a simulator to accept the input string  $a^n b^{2n}$ .

#### TRANSITION DIAGRAM:



**RESULT:** The PDA is designed to compute the string given as input using a simulator.

**AIM:** To design TM using a simulator to accept the input string  $anbn$ .

Automaton Simulator

File Help

● ↶ A ▶ ⏸ ⏪ ⏩ ↺

Diagram illustrating a finite state automaton (FSA) with four states (green circle, red circle, red circle, red circle) and transitions labeled with pairs of characters (e.g., a: c, >).

Transitions:

- Green state to Middle Red state: a: c, > ; d: a, >
- Middle Red state to Right Red state: b: d, < ; d: a, <
- Right Red state to Green state: c: c, >
- Green state to Bottom Red state: d: \_, >

Input sequence: c c d d

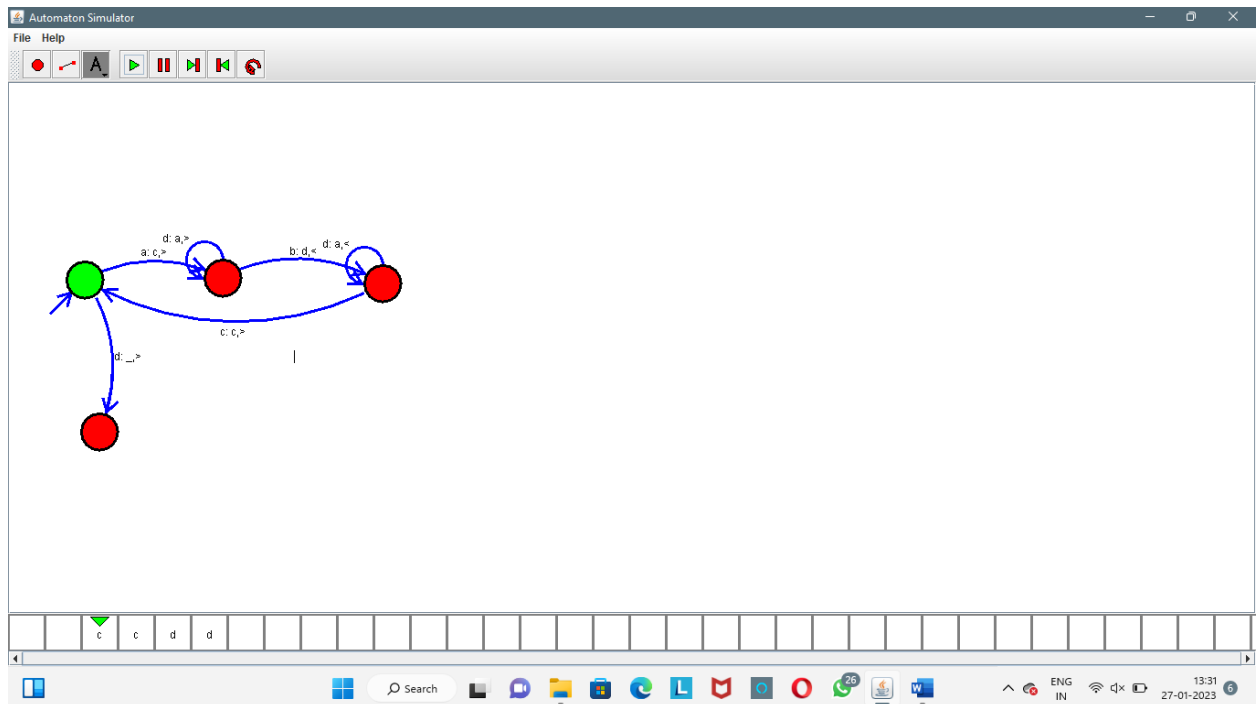
System tray: Search, Taskbar, System icons (Network, Volume, Date/Time: 13:31 27-01-2023)

**RESULT:** The TM is designed to compute the string given as input using a simulator.

## 16. Design TM using simulator to accept the input string $a^n b^{2n}$

**AIM:** To design TM using a simulator to accept the input string  $a^n b^{2n}$ .

### TRANSITION DIAGRAM:

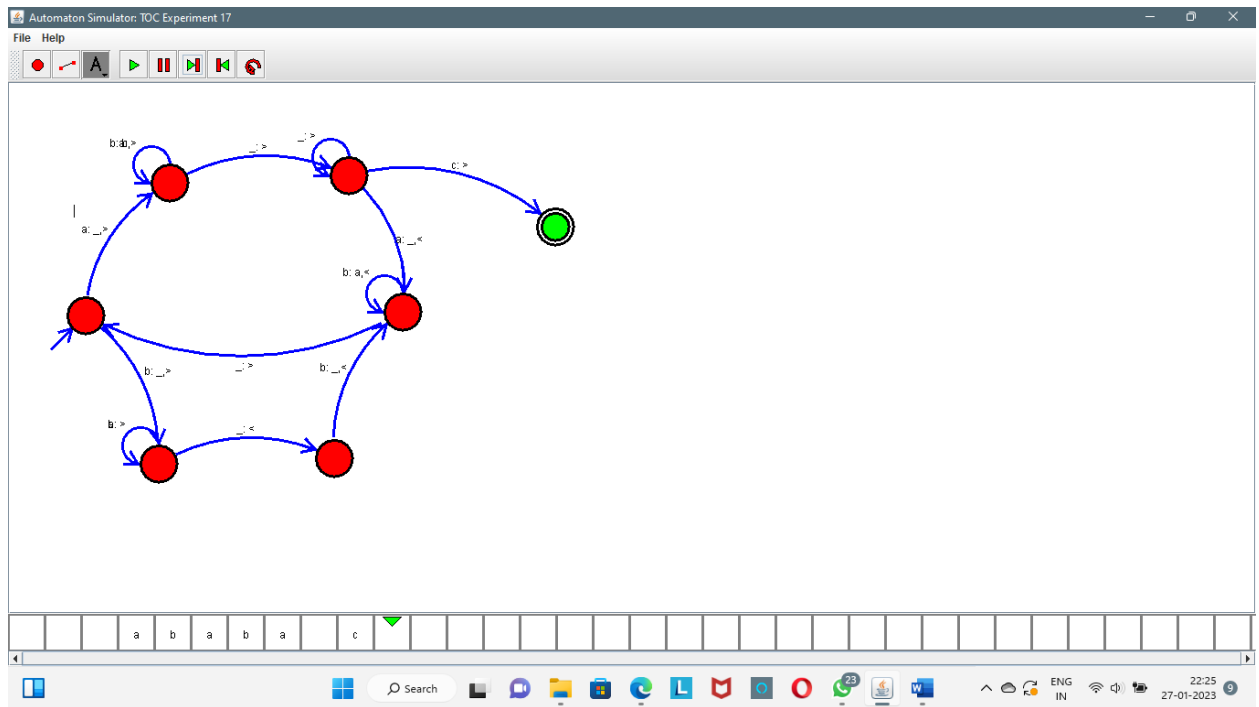


**RESULT:** The TM is designed to compute the string given as input using a simulator.

## 17. Design TM using simulator to accept the input string Palindrome “ababa”

**AIM:** To design TM using simulator to accept the input string Palindrome ababa

### TRANSITION DIAGRAM:

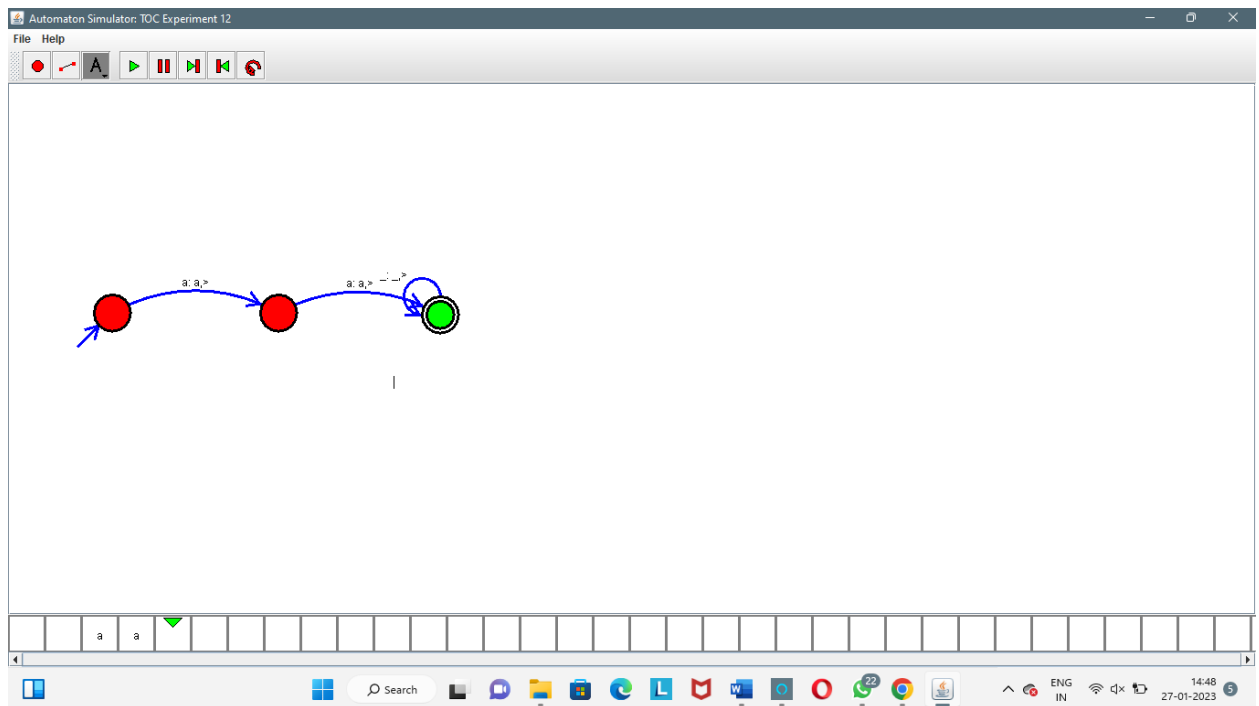


**RESULT:** The TM is designed to compute the string given as input using a simulator.

## 18. Design TM using simulator to accept the input string “ww”

**AIM:** To design TM using simulator to accept the input string ww

### TRANSITION DIAGRAM:

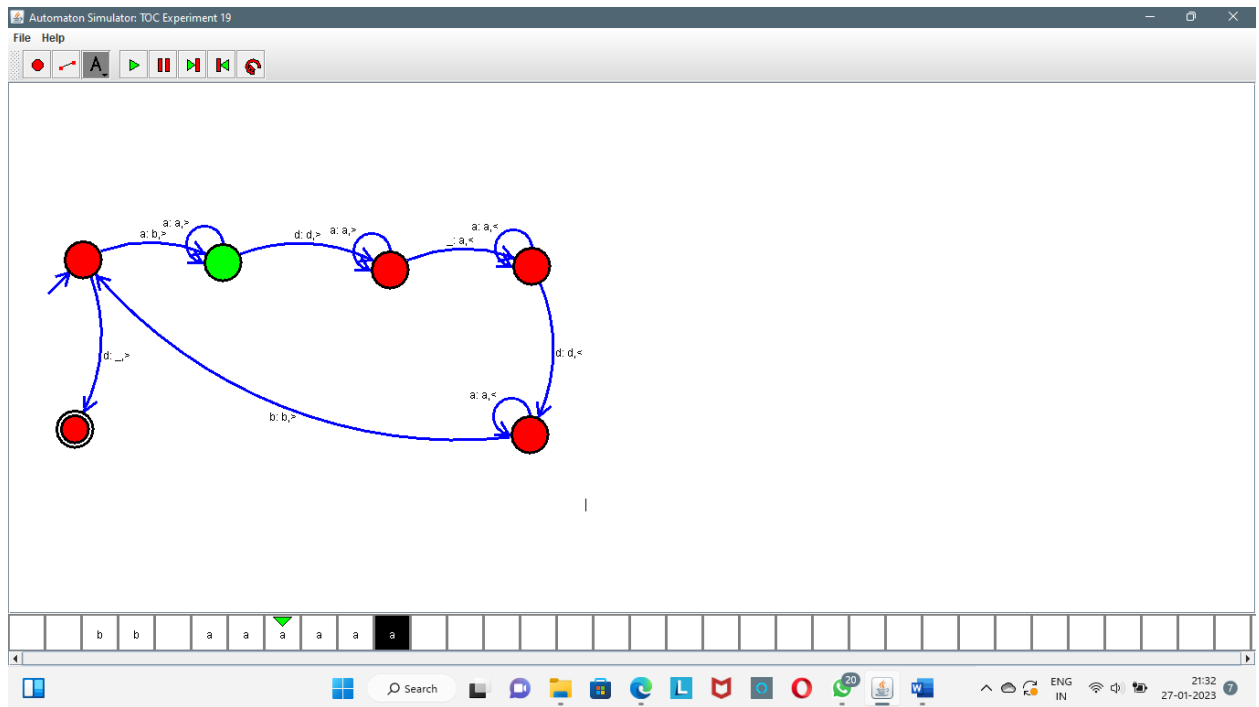


**RESULT:** The TM is designed to compute the string given as input using a simulator.

## 19. Design TM using simulator to perform addition of 'aa' and 'aaa'

**AIM:** To design TM using simulator to perform addition of 'aa' and 'aaa'

### TRANSITION DIAGRAM:



**RESULT:** The TM is designed & performed addition by using a simulator.

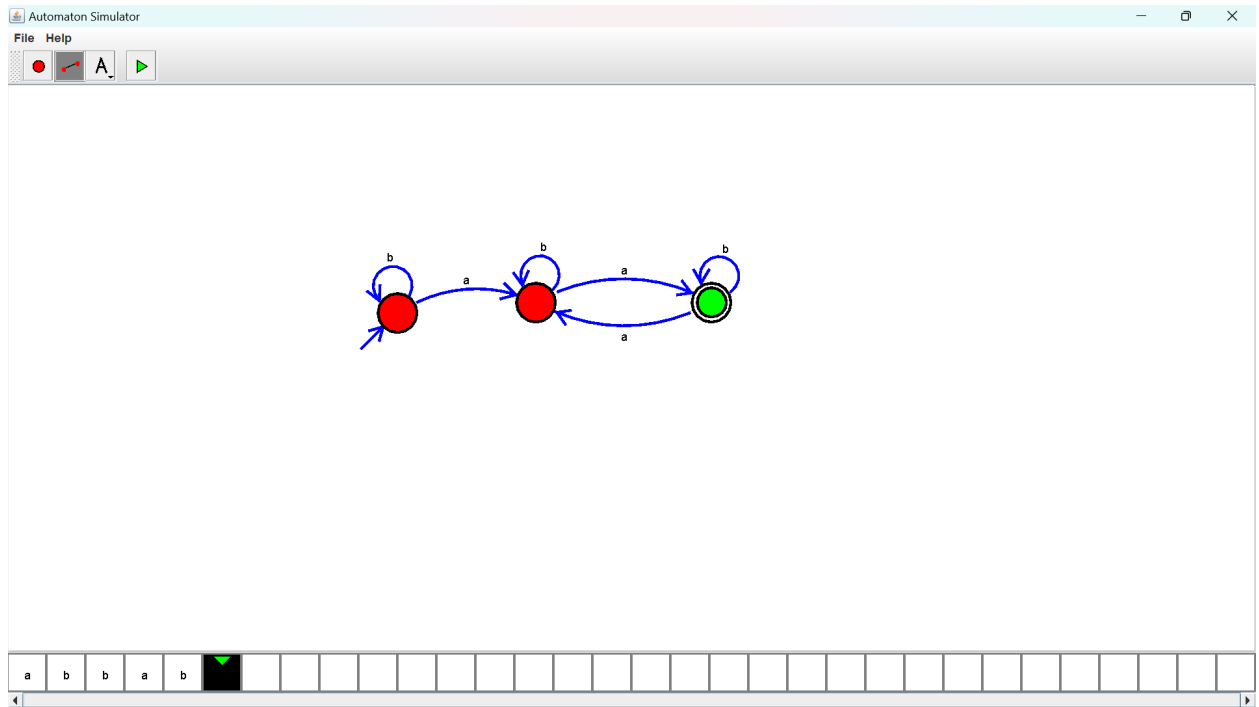


**RESULT:** The TM is designed & performed subtraction by using a simulator.

**21. Design DFA using a simulator to accept even number of a's.**

**AIM:** To design DFA using a simulator to accept even number of a's.

**TRANSITION DIAGRAM:**

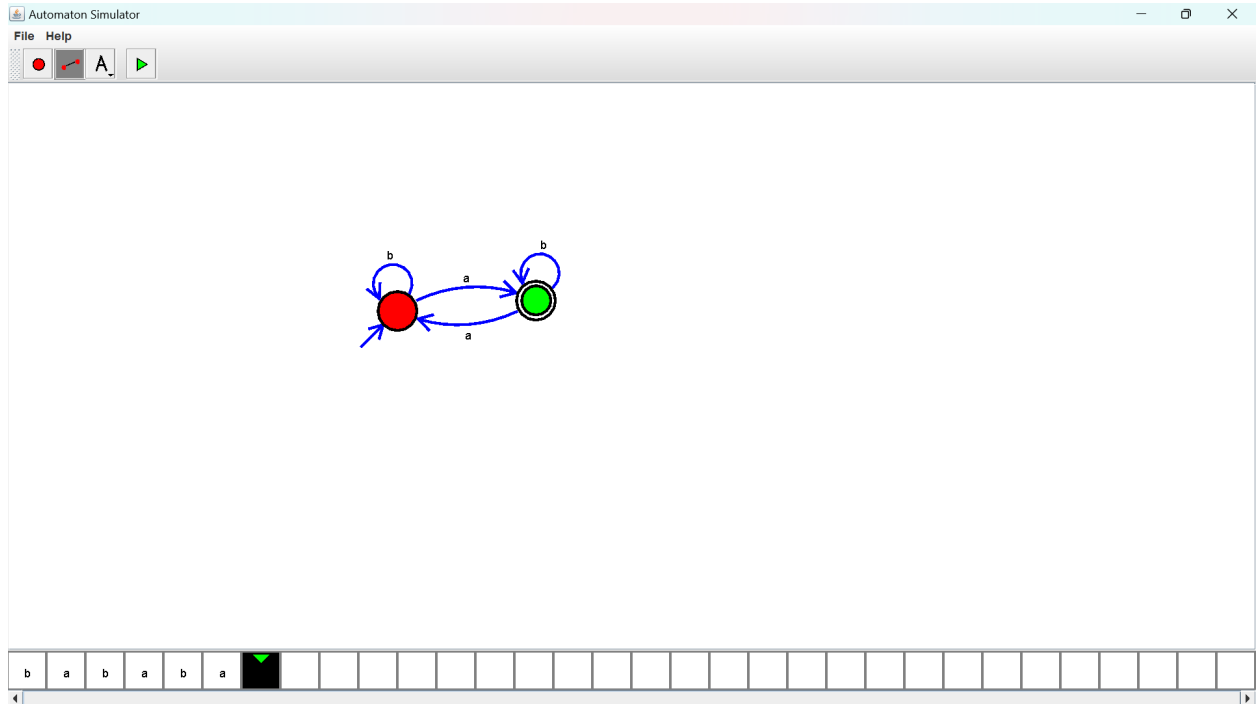


**RESULT:** Hence designed DFA using a simulator to accept the even number of a's by using a simulator.

## 22. Design DFA using simulator to accept odd number of a's

**AIM:** To design DFA using simulator to accept odd number of a's

**TRANSITION DIAGRAM:**

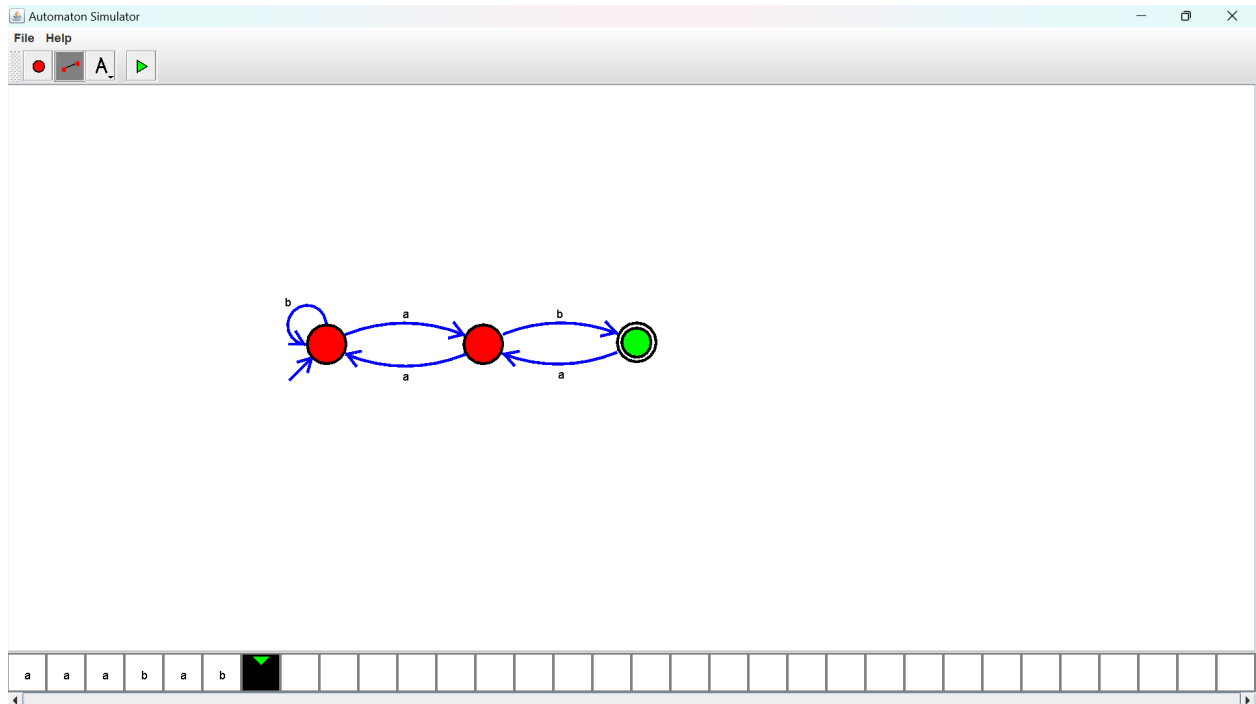


**RESULT:** Hence designed DFA using a simulator to accept the odd number of a's by using a simulator.

**23. Design DFA using a simulator to accept the string the end with ab over set {a,b) W= aaabab.**

**AIM:** To design DFA using a simulator to accept the string the end with ab over set {a,b) W= aaabab.

**TRANSITION DIAGRAM:**

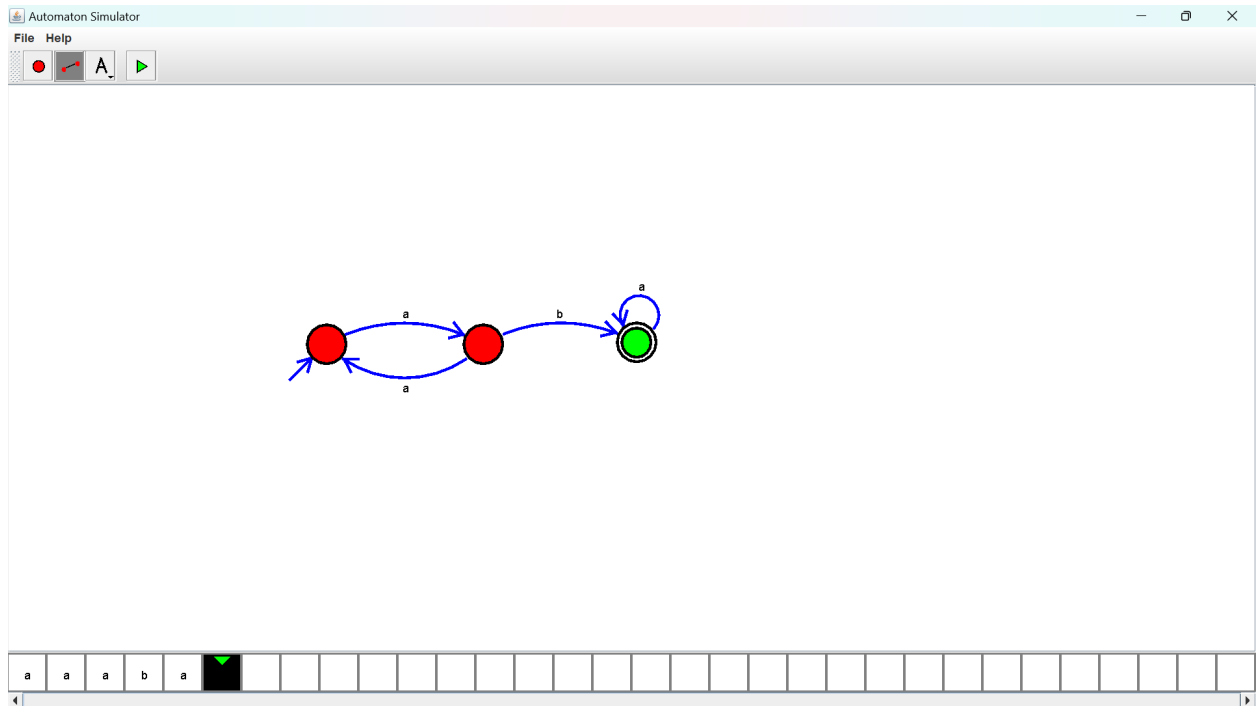


**RESULT:** Hence designed DFA using a simulator to accept the string the end with ab.

**24. Design DFA using simulator to accept the string having 'ab' as substring over the set {a,b}**

**AIM:** To design DFA using simulator to accept the string having 'ab' as substring over the set {a,b}

**TRANSITION DIAGRAM:**

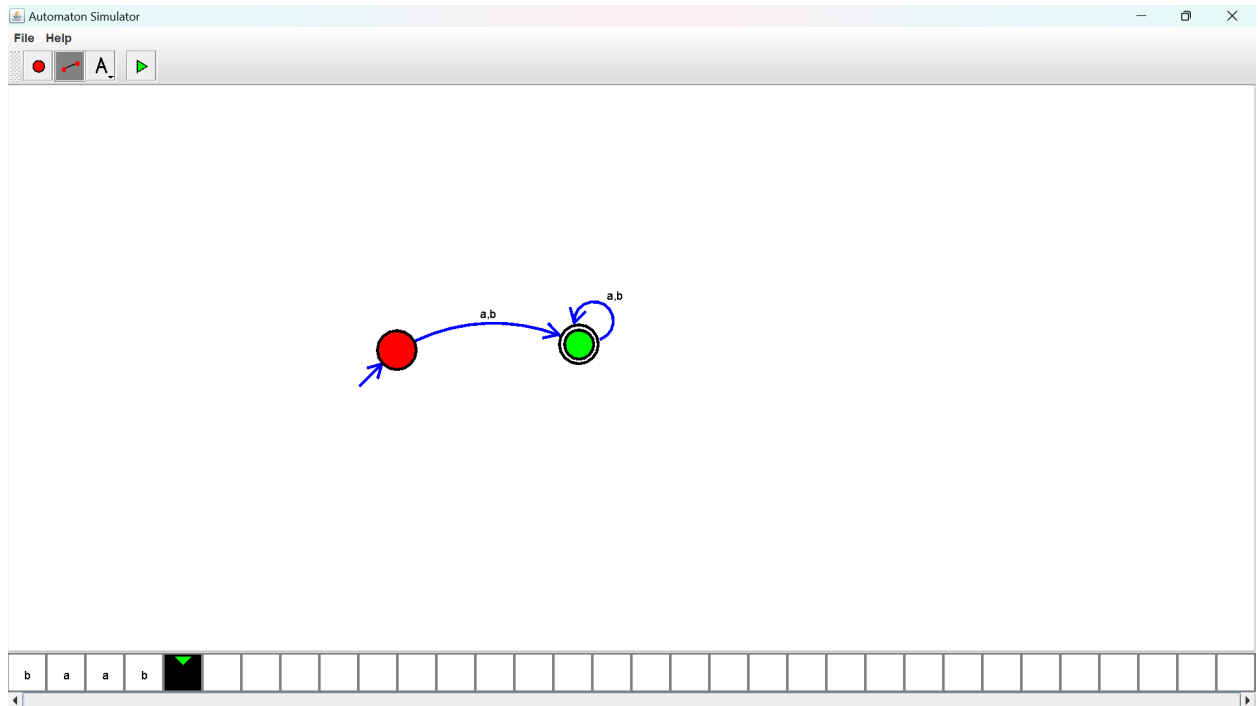


**RESULT:** Hence designing DFA using a simulator to accept the string having 'ab' as substring.

**25. Design DFA using simulator to accept the string start with a or b over the set {a,b}**

**AIM:** To design DFA using simulator to accept the string start with a or b over the set {a,b}

**TRANSITION DIAGRAM:**

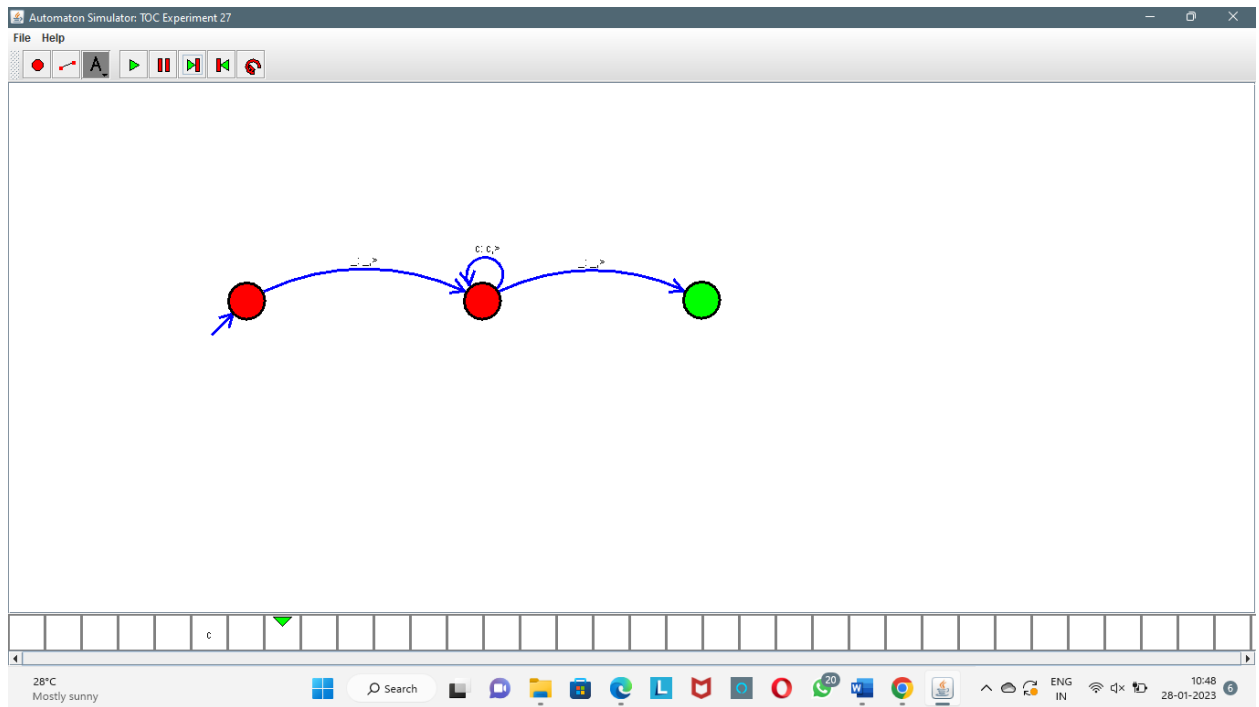


**RESULT:** Hence designing DFA using a simulator to accept the string start with a or b.

**27.Design TM using a simulator to accept the input string wcw .**

**AIM:** To design TM using a simulator to accept the input string wcw.

**TRANSITION DIAGRAM:**



**RESULT:** Hence designing TM accepting the input string wcw.

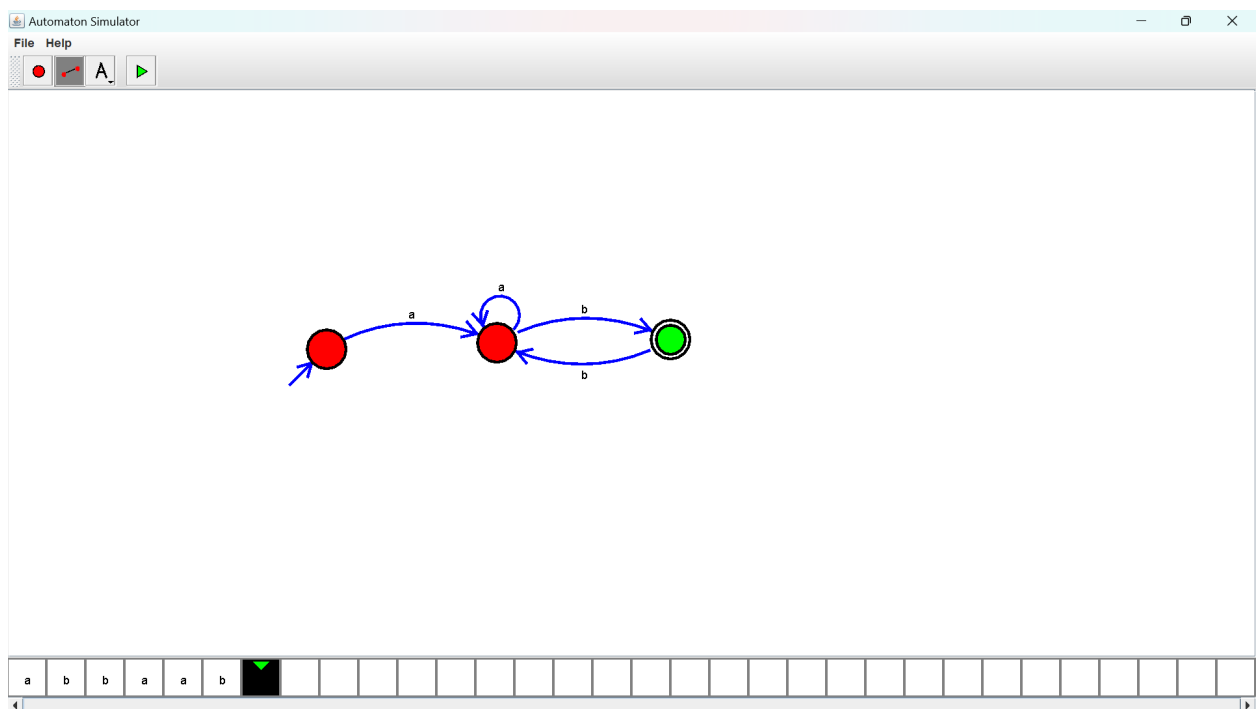
**28. Design DFA using simulator to accept the string the end with ab over set**

**{a,b) W= abbaabab**

**AIM:** To design DFA using simulator to accept the string the end with ab over

set {a,b) W= abbaabab

**TRANSITION DIAGRAM:**



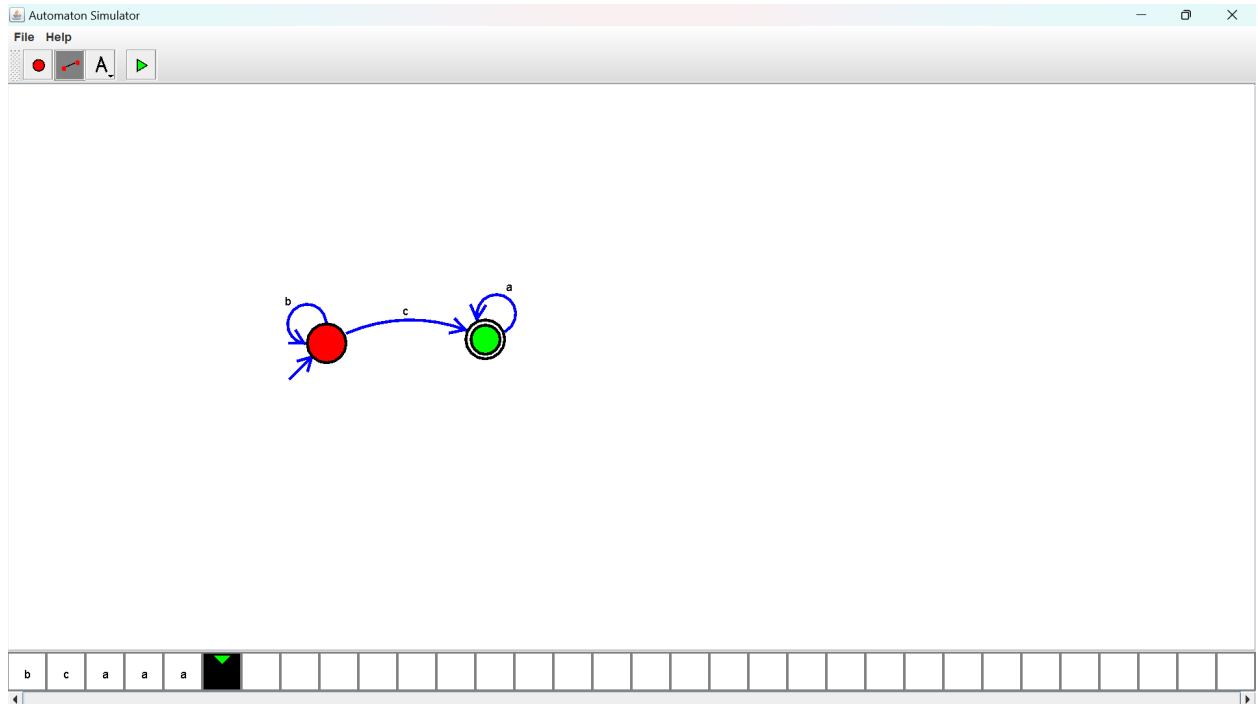
**RESULT:** Hence designing DFA using a simulator to accept the string the end with ab.



**29. Design DFA using a simulator to accept the input string “bc” ,”c”,and ”bcaaa”.**

**AIM:** To design DFA using a simulator to accept the input string “bc” ,”c”,and ”bcaaa”.

**TRANSITION DIAGRAM:**

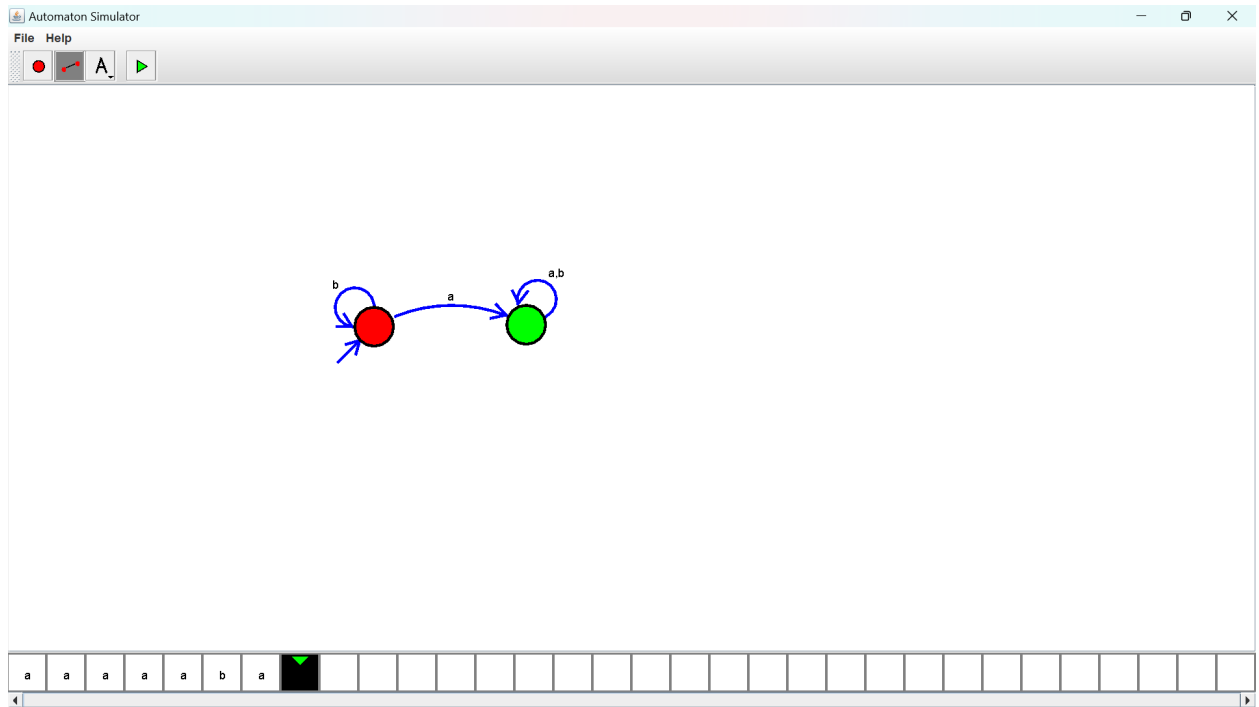


**RESULT:** Hence designing DFA using a simulator to accept the string “bc” ,”c”,and ”bcaaa”.

**30. Design NFA to accept any number of a's where input={a,b}.**

**AIM:** To design NFA to accept any number of a's where input={a,b}.

**TRANSITION DIAGRAM:**

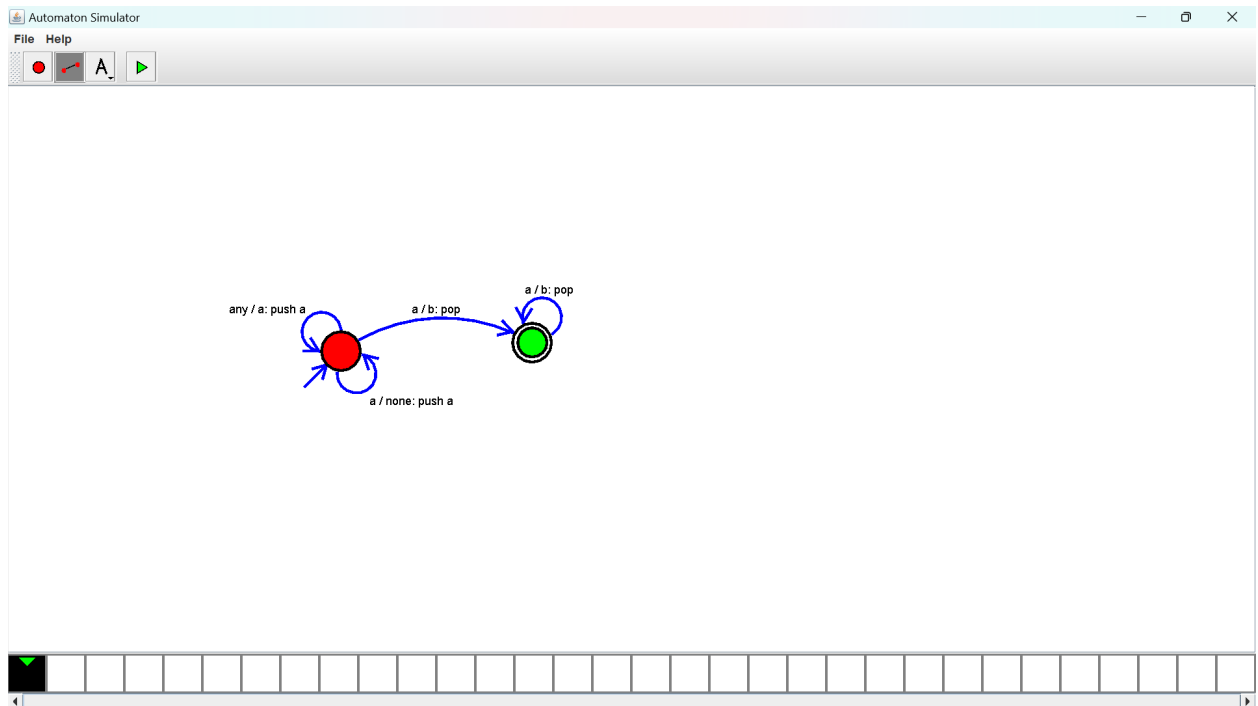


**RESULT:** Hence designing NFA to accept any number of a's.

### 31. Design PDA using simulator to accept the input string $a^n b^n$

**AIM:** To design PDA using a simulator to accept the input string  $a^n b^n$ .

#### TRANSITION DIAGRAM:

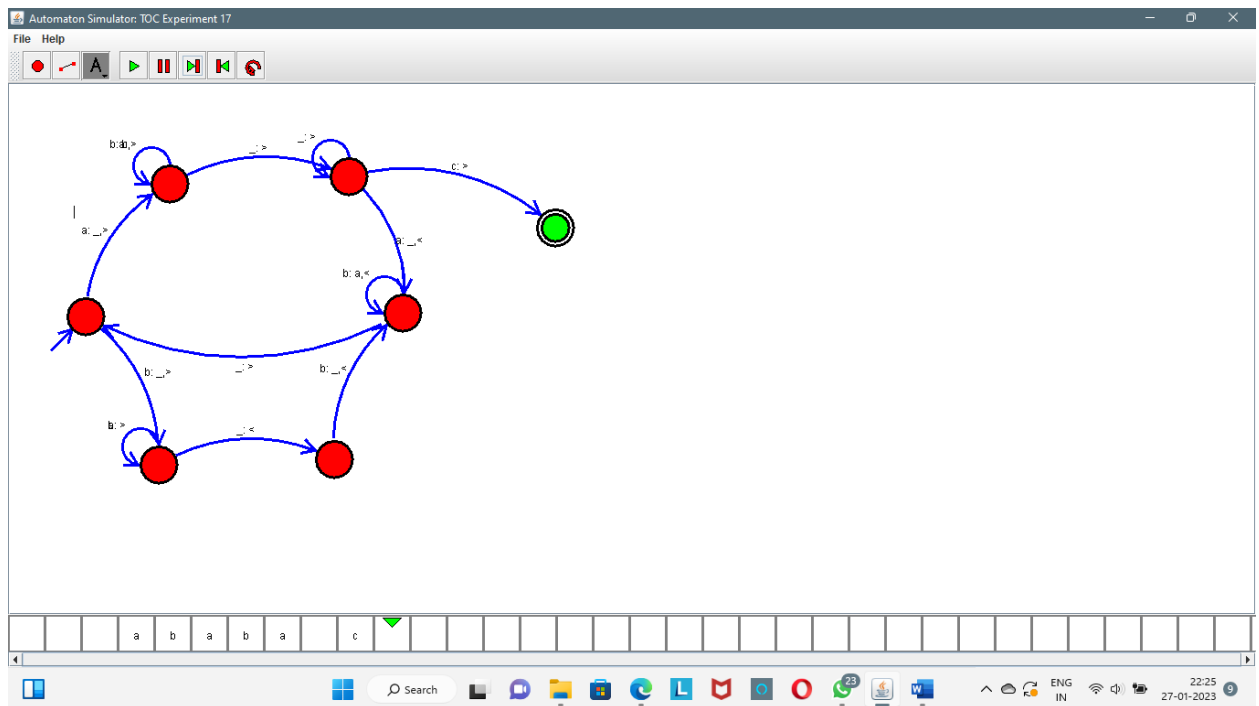


**RESULT:** Hence designing PDA to accept the input string  $a^n b^n$

### 32. Design TM using simulator to perform string comparison where $w=\{aba\ aba\}$

**AIM:** To design TM using simulator to perform string comparison where  $w=\{aba\ aba\}$

#### **TRANSITION DIAGRAM:**

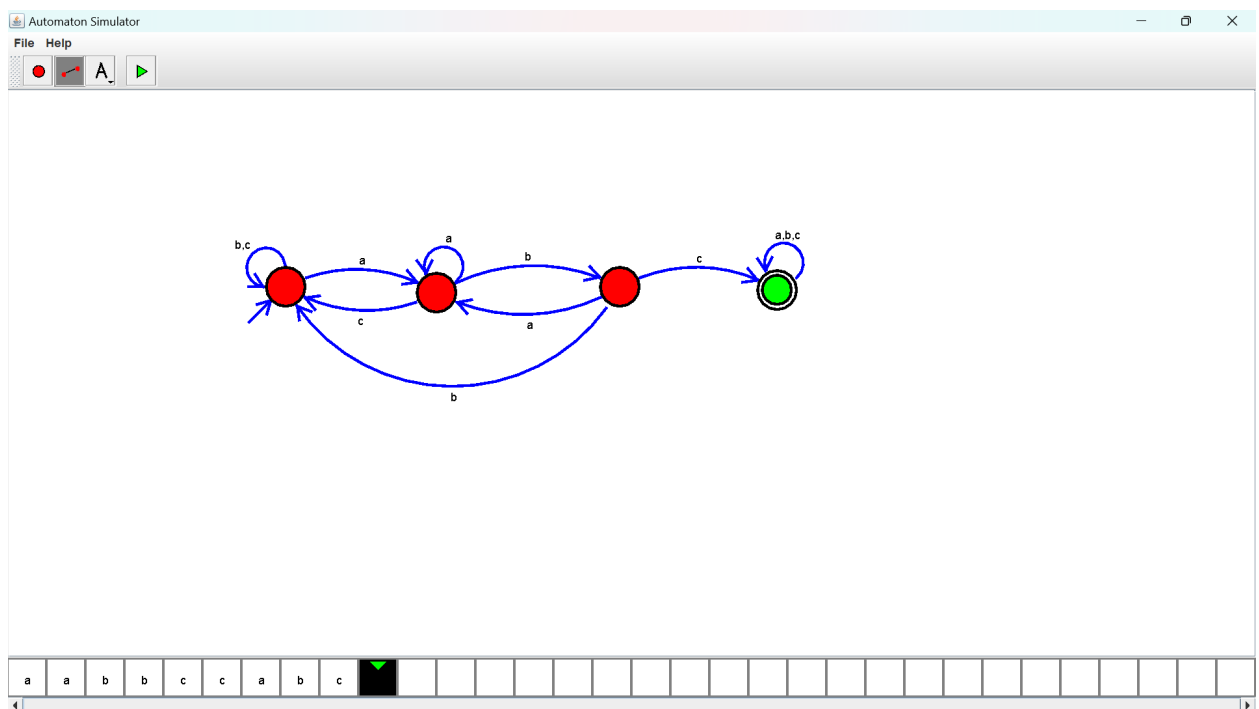


**RESULT:** Hence designing TM using a simulator to perform string comparison.

**33. Design DFA using simulator to accept the string having 'abc' as substring over the set {a,b,c}**

**AIM:** To design DFA using simulator to accept the string having 'abc' as substring over the set {a,b,c}

**TRANSITION DIAGRAM:**

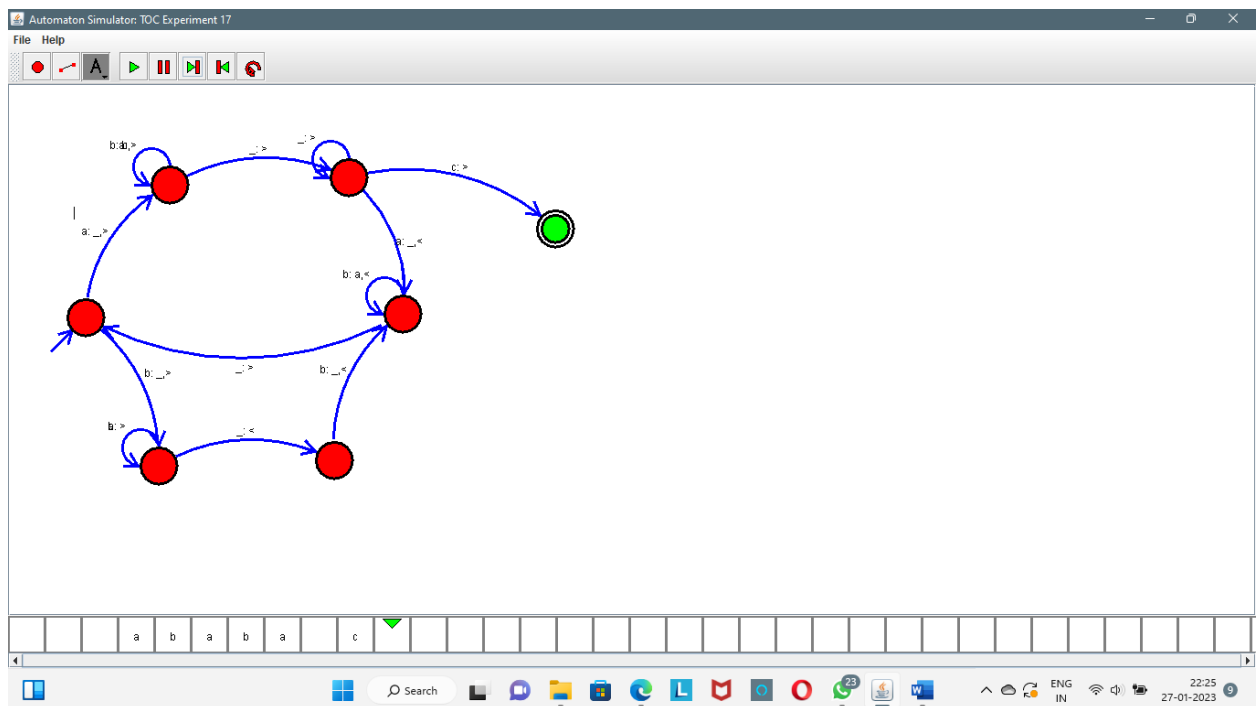


**RESULT:** Hence DFA using simulator to accept the string having abc as substring.

### 34. Design TM using simulator to perform string comparison where $w=\{aba\ aba\}$

**AIM:** To design TM using simulator to perform string comparison where  $w=\{aba\ aba\}$

#### TRANSITION DIAGRAM:

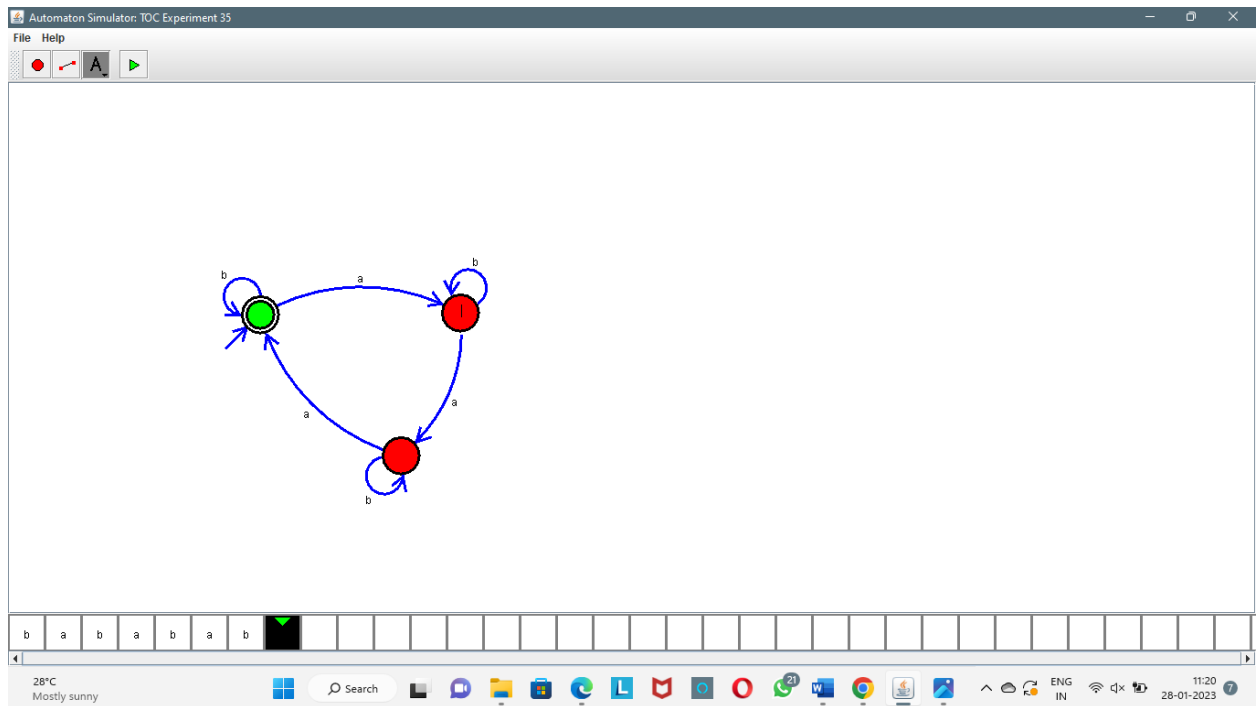


**RESULT:** Hence designing TM to perform the string by simulator.

**35. Design DFA using simulator to accept strings in which a's always appear tripled over input {a,b}**

**AIM:** To design DFA using simulator to accept strings in which a's always appear tripled over input {a,b}

**TRANSITION DIAGRAM:**

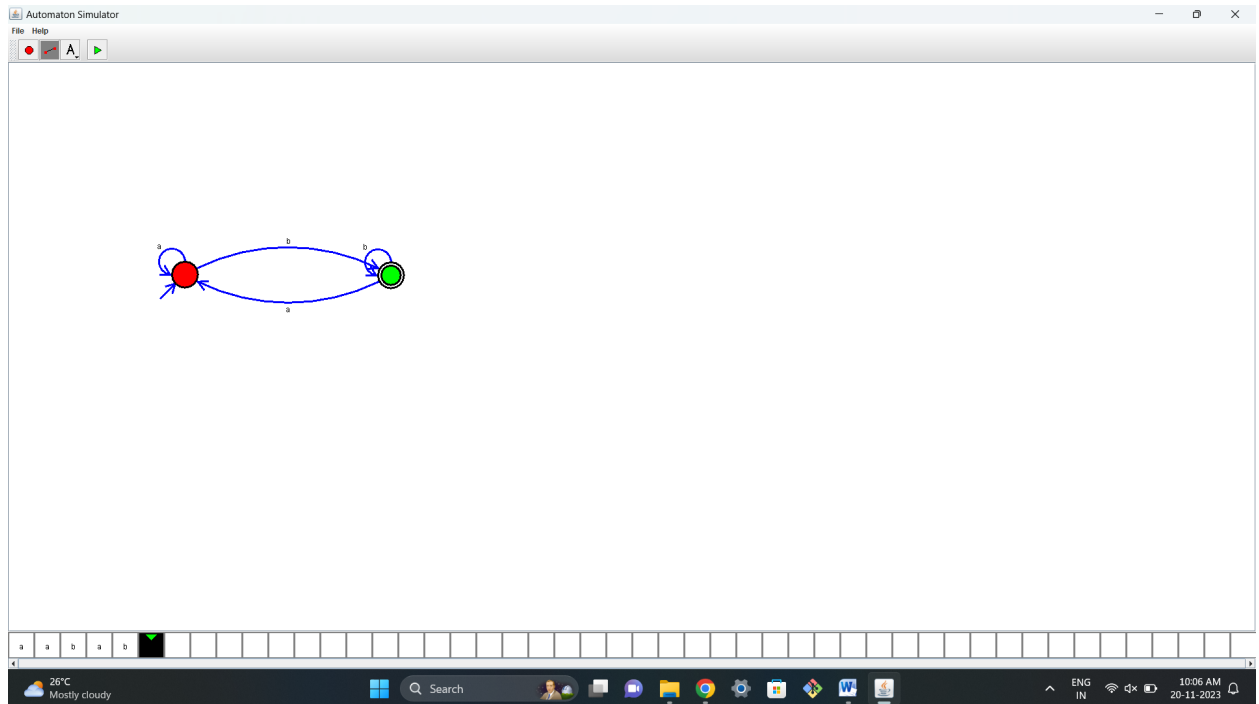


**RESULT:** Hence designing DFA using a simulator to accept strings in which a's always appear tripled.

**36. Design NFA using a simulator to accept the string the starts with a and ends with b over the set {a,b} and check whether W= abaab is accepted or not.**

**AIM:** To Design NFA using a simulator to accept the string the start with a and end with b over set {a,b} and check whether W= abaab is accepted or not.

**TRANSITION DIAGRAM:**



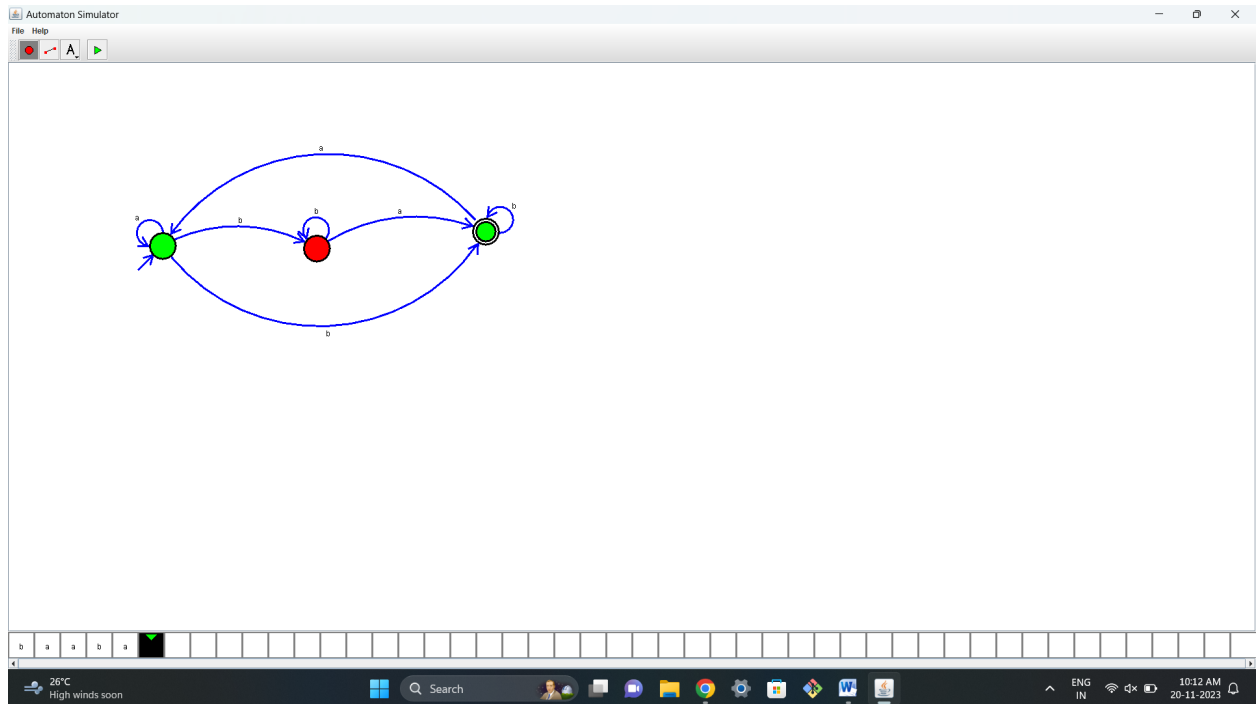
**RESULT:** Hence designing NFA using a simulator to accept the string whether w=abaab is accepted or not.



**37. Design NFA using a simulator to accept the string that start and end with different symbols over the input {a,b}.**

**AIM:** To design NFA using a simulator to accept the string that start and end with different symbols over the input {a,b}.

**TRANSITION DIAGRAM:**

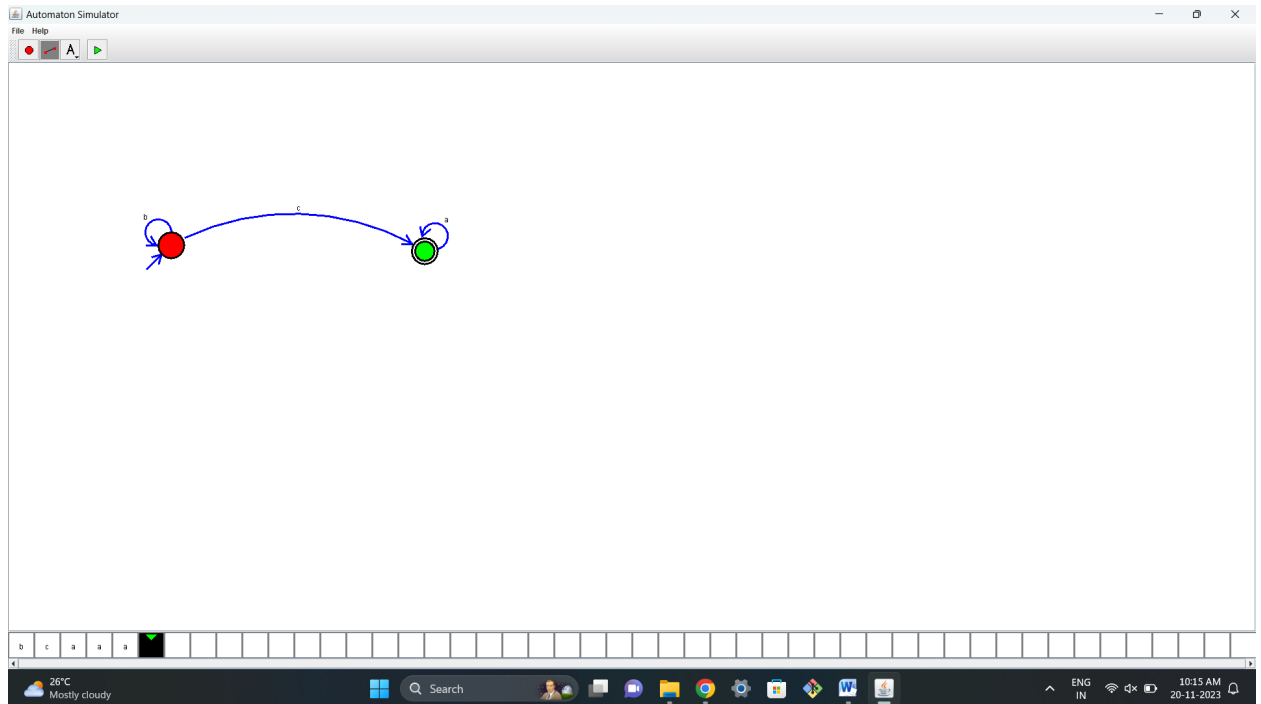


**RESULT:** Hence designing NFA using a simulator to accept the string that start and end with different symbols.

**38. Design NFA using a simulator to accept the input string “bbc” ,”c”,and ”bcaaa”.**

**AIM:** To design a NFA using a simulator to accept the input string “bbc” ,”c”,and ”bcaaa”.

**TRANSITION DIAGRAM:**

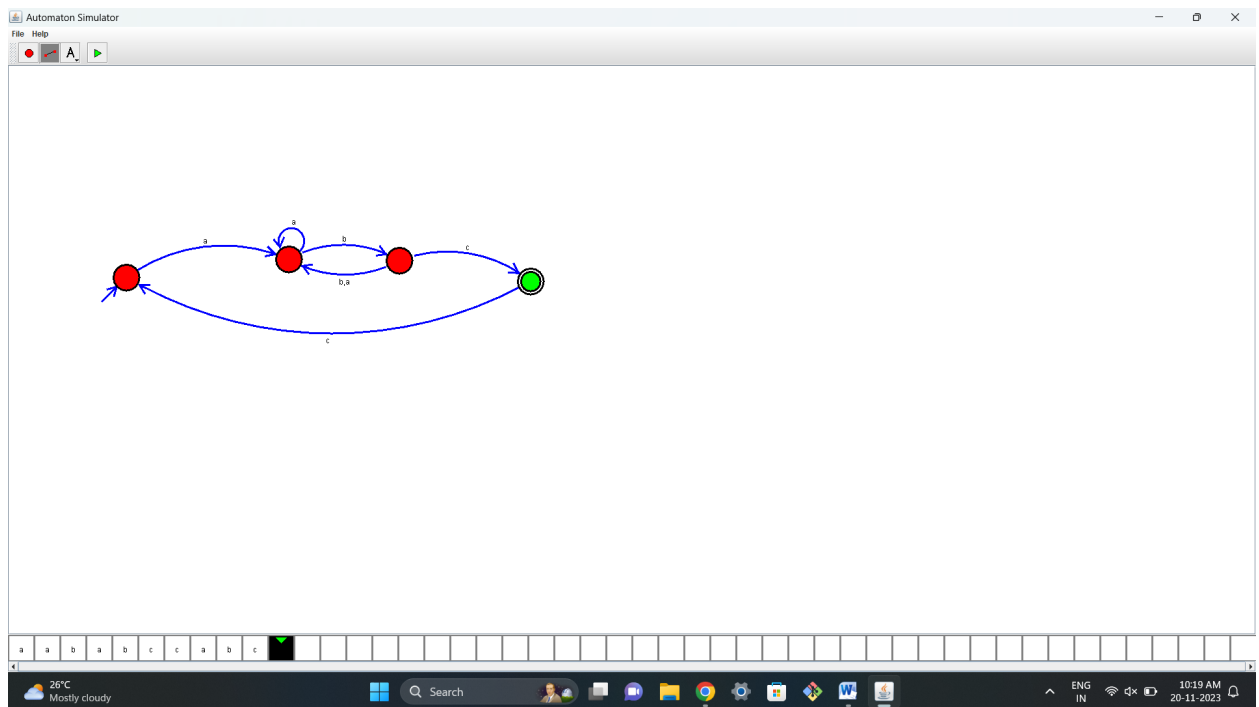


**RESULT:** Hence designing NFA using a simulator to accept the string bbc, c and bcaaa

**39. Design DFA using simulator to accept the string the end with abc over set {a,b,c) W= abbaababc**

**AIM:** To design DFA using simulator to accept the string the end with abc over set {a,b,c) W= abbaababc

**TRANSITION DIAGRAM:**

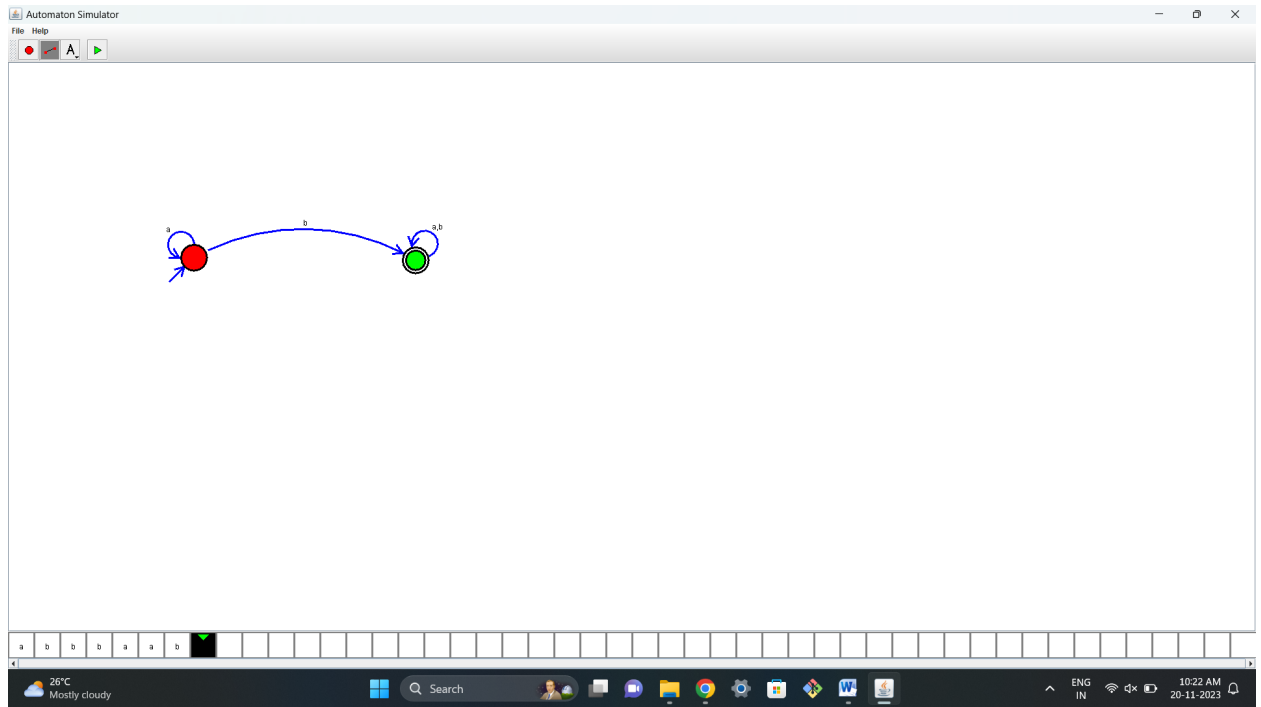


**RESULT:** Hence designing NFA using a simulator to accept the string that end with abc.

**40. Design NFA to accept any number of b's where input={a,b}.**

**AIM:** To design NFA to accept any number of b's where input={a,b}.

**TRANSITION DIAGRAM:**



**RESULT:** Hence designing NFA using a simulator to accept any number of b's.



