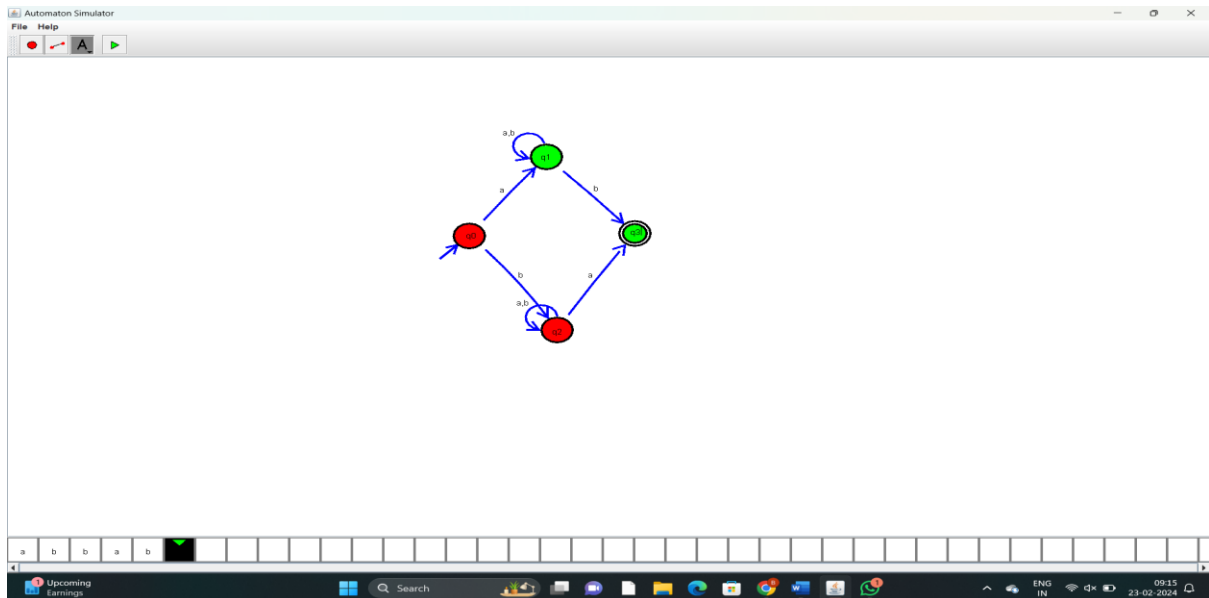
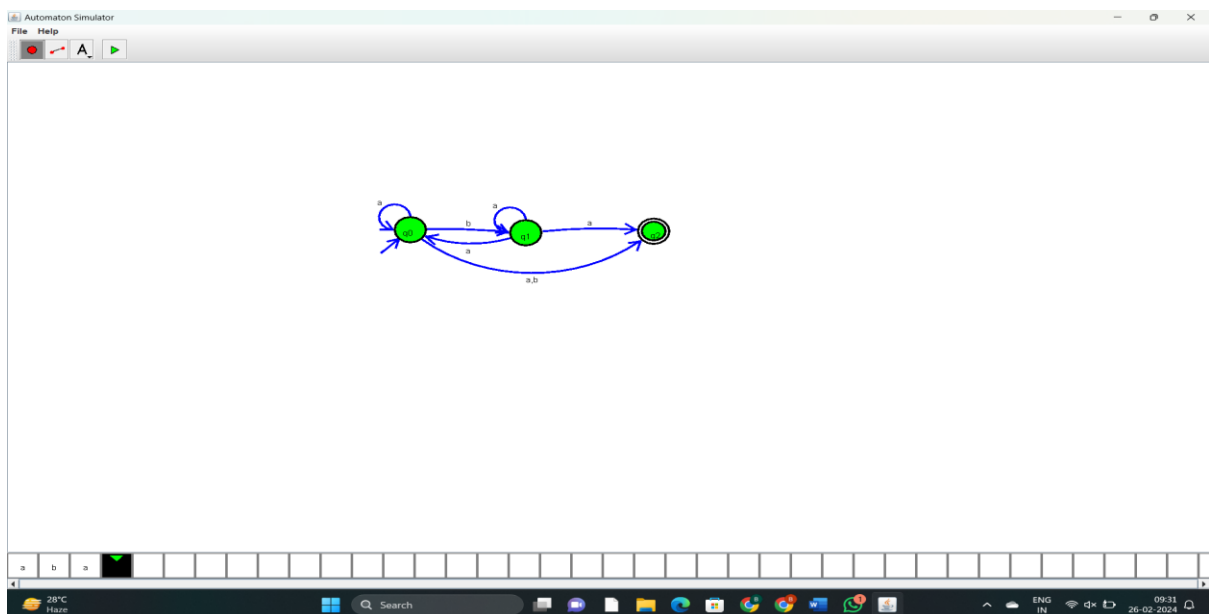


**DAY2**  
**THEORY OF COMPUTATION**  
**PRATICAL SESSION**

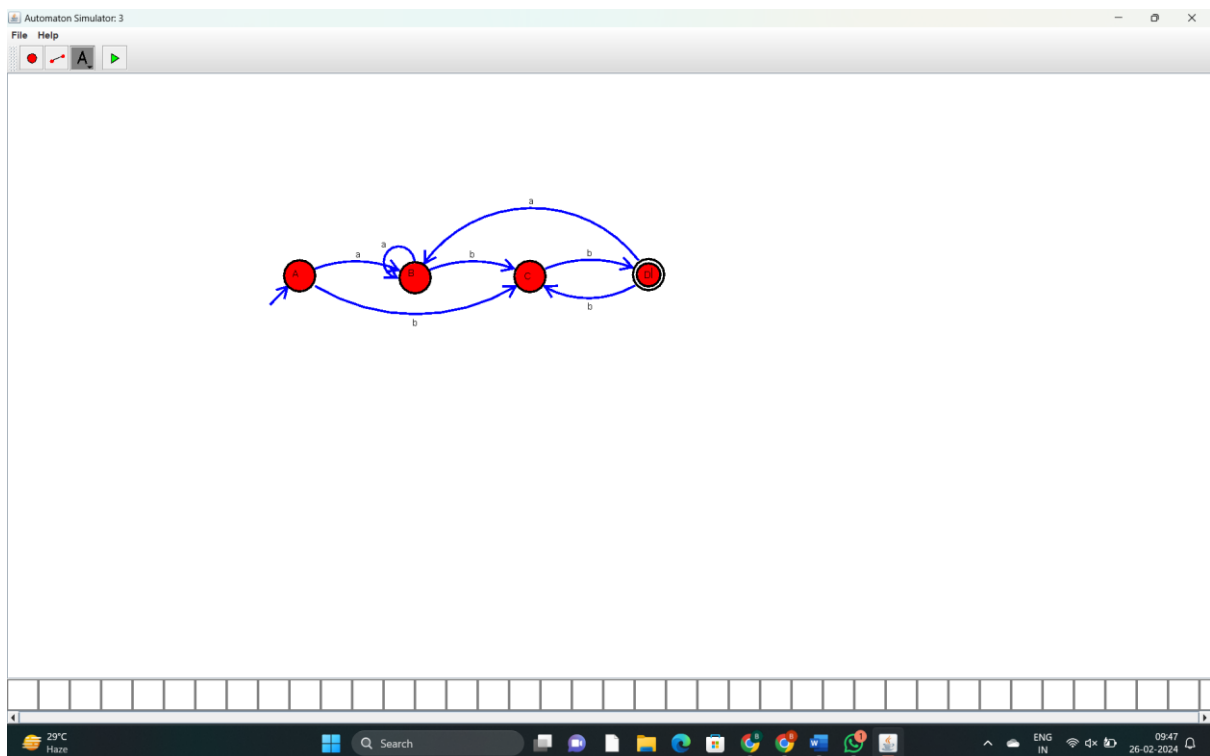
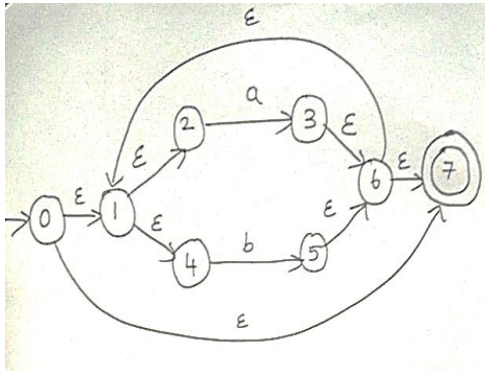
**2.3) Construct an NFA for binary strings that start and end with different digits.**



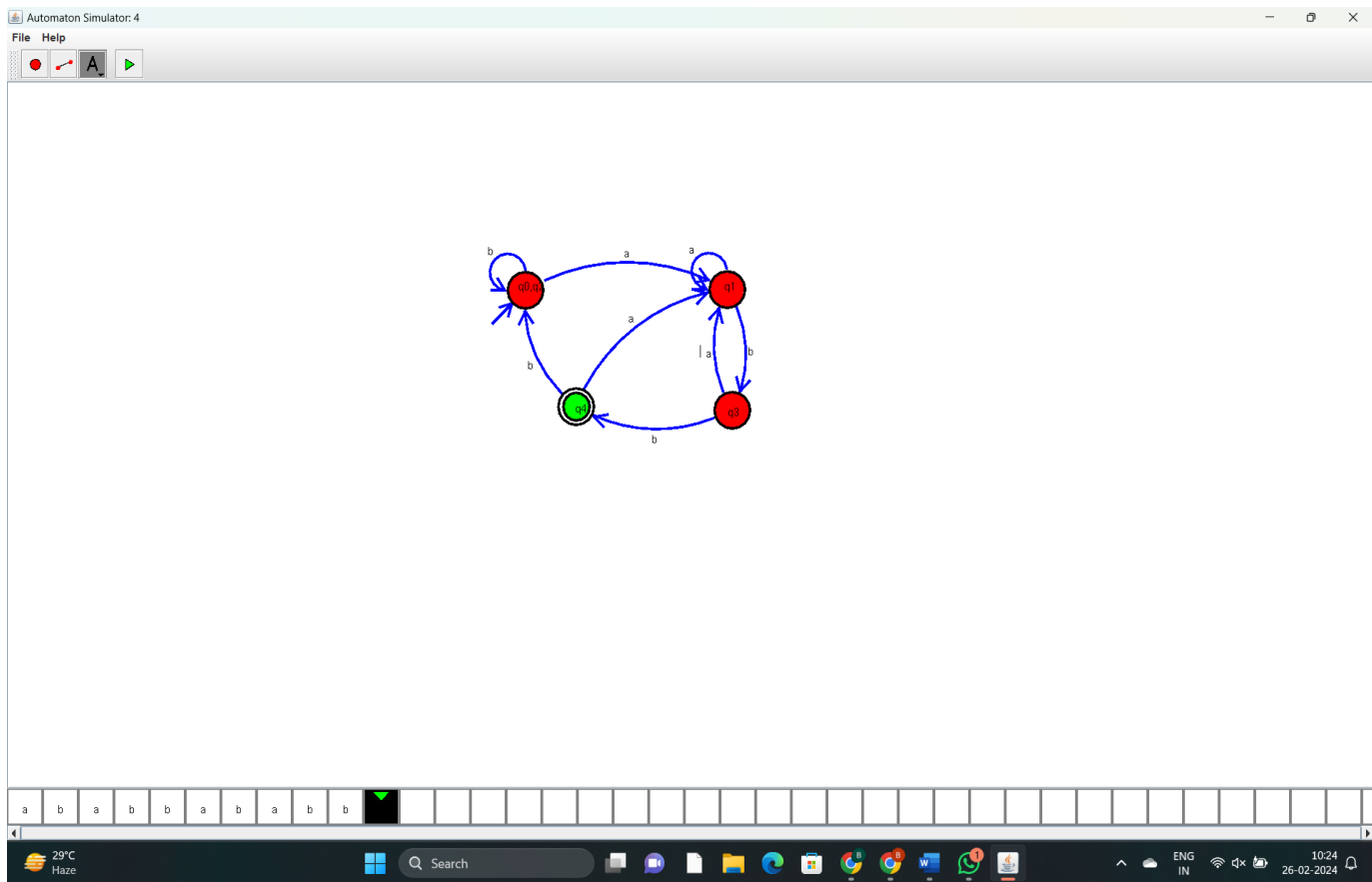
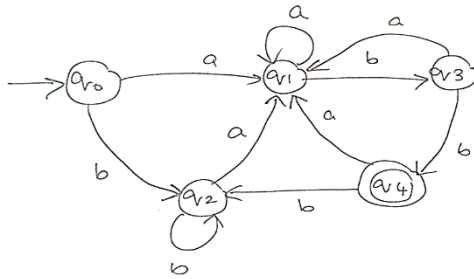
**3. Construct an NFA without  $\epsilon$ -moves equivalent to the NFA with  $\epsilon$ -moves given**



4. Construct a DFA equivalent to the NFA with  $\epsilon$ -moves given below:

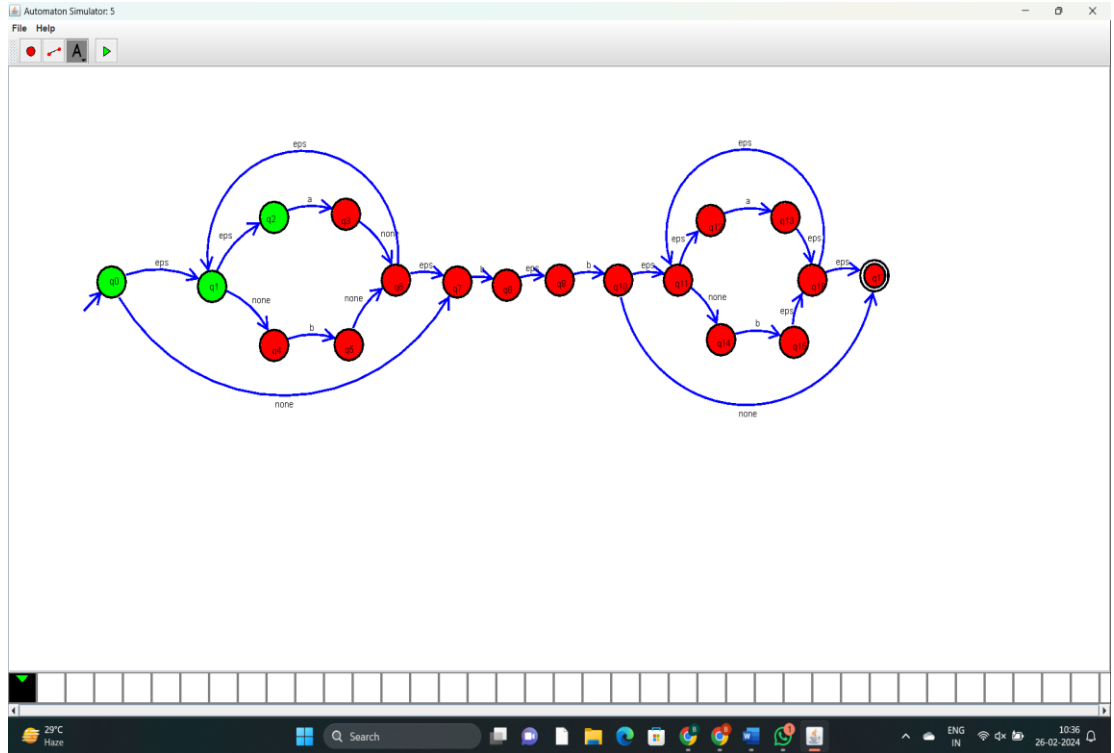


5.Minimize the DFA given below:

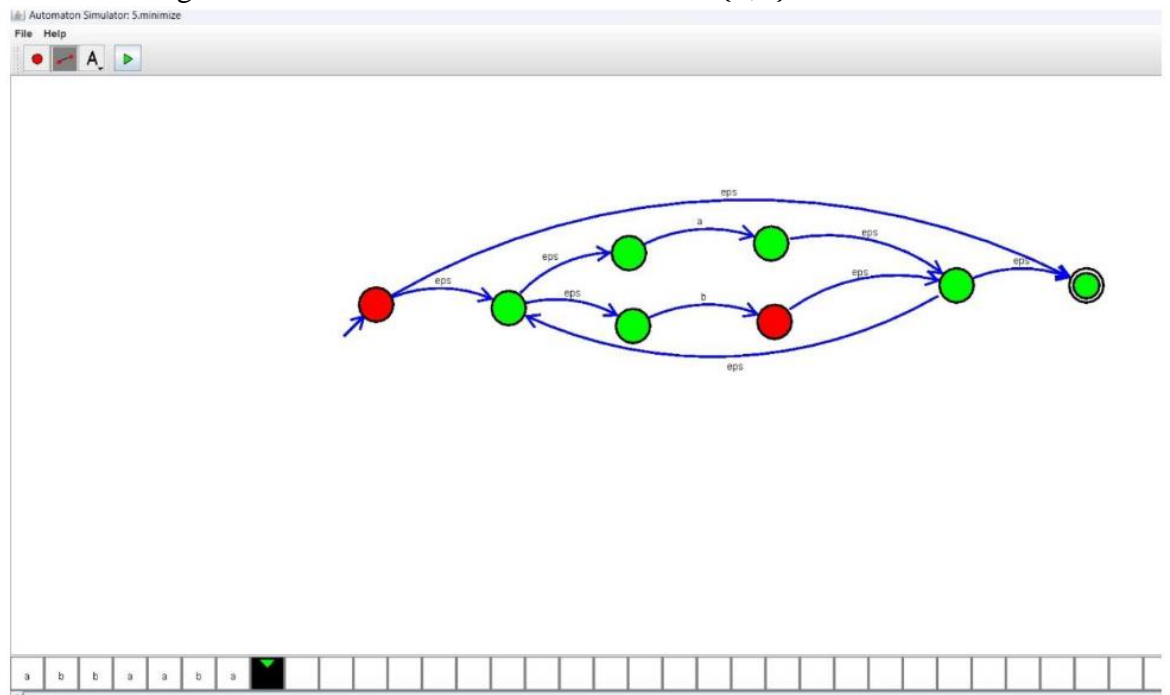


**6. Define r.e. for the following languages:**

- i) Set of all strings of a's and b's having bb as a substring

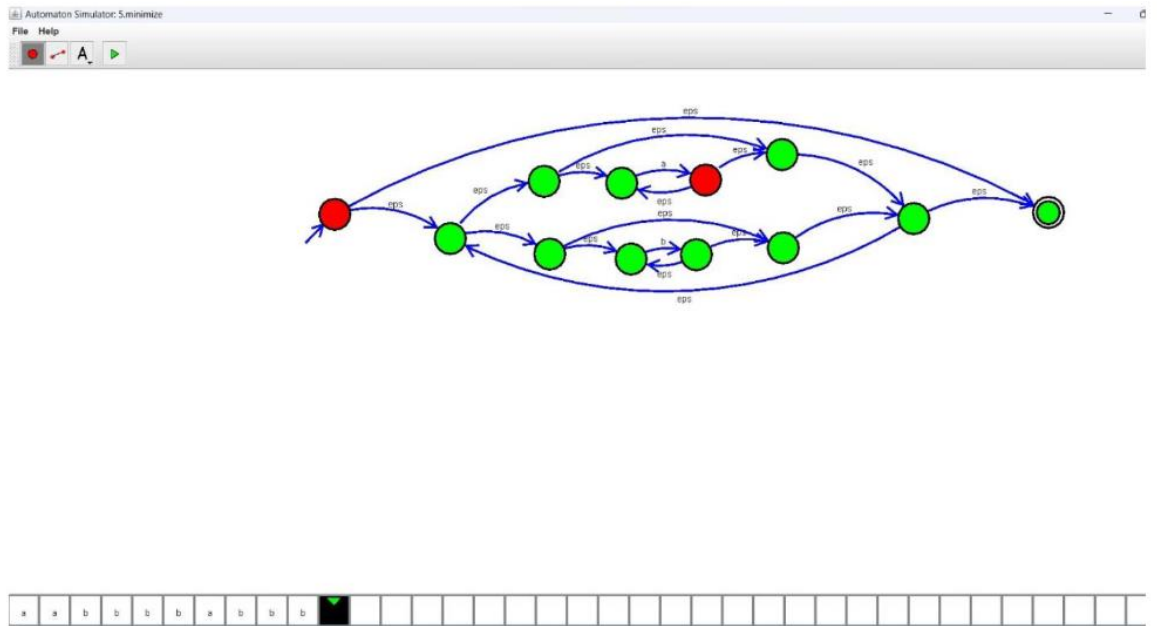


- ii) Set of all strings that start with a and end with b over  $\Sigma = \{a, b\}$

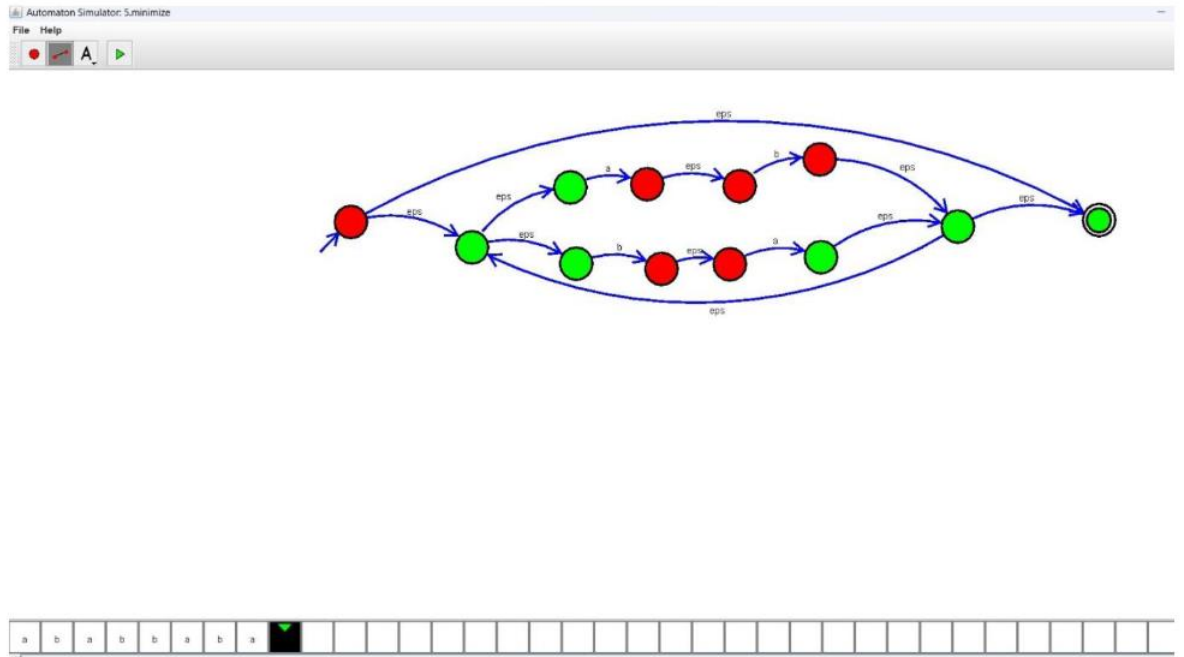


7. Identify the language defined by the r.e:

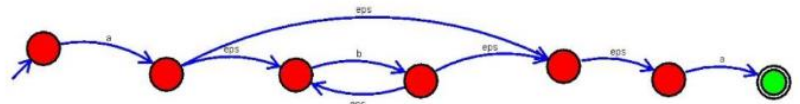
i)  $(a^*+b^*)^*$



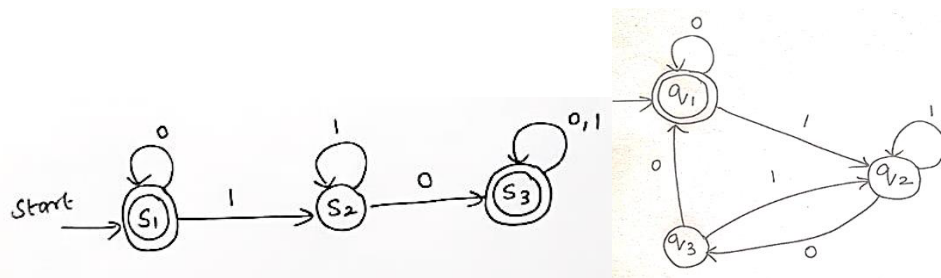
ii)  $(01+10)^*$



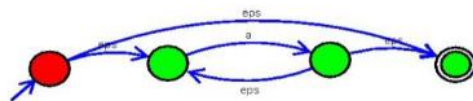
iii)  $ab^*a$



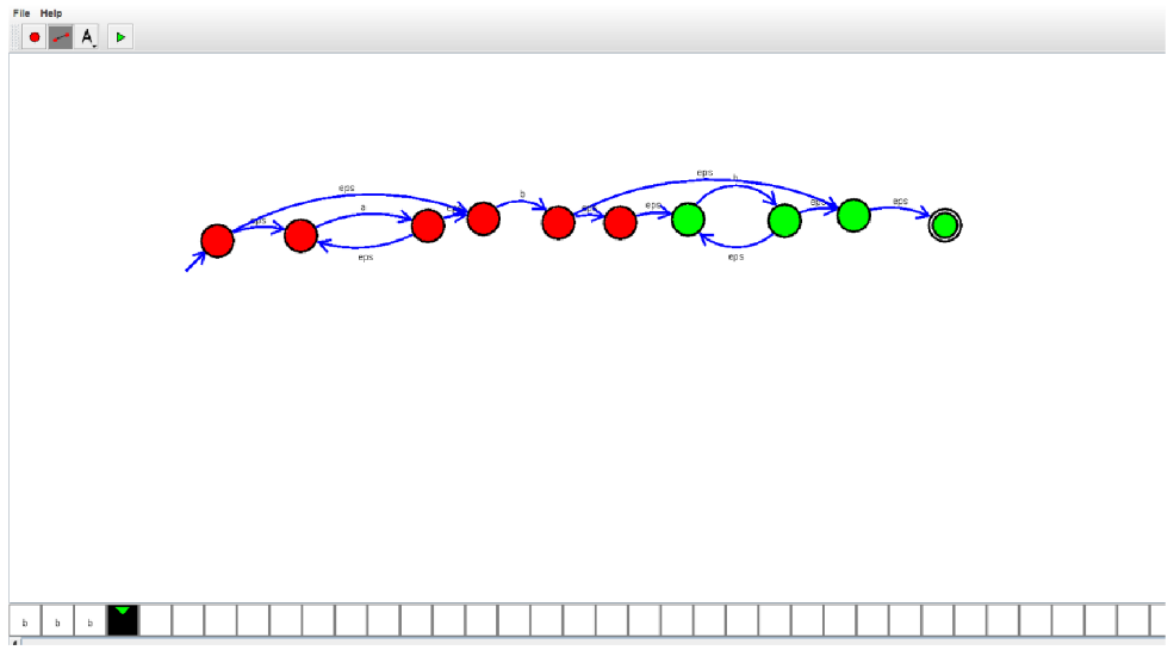
8. Construct r.e. from the DFA given below:



S1:  $a^*$



S2:  $a^*bb^*$



S3:  $a^*bb^*a(a+b)^*$

