









# GALGOTIAS UNIVERSITY

(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

**TITLE**

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**NAME:**

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**ADMISSION NUMBER:**

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**ENROLLMENT NUMBER:**

---

**SECTION:**

---

**SEMESTER:**

---

**COURSE NAME:**

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**COURSE CODE:**

---

**SUBMITTED TO:**

---

**SUBMISSION DATE:**

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**FACULTY SIGNATURE:**

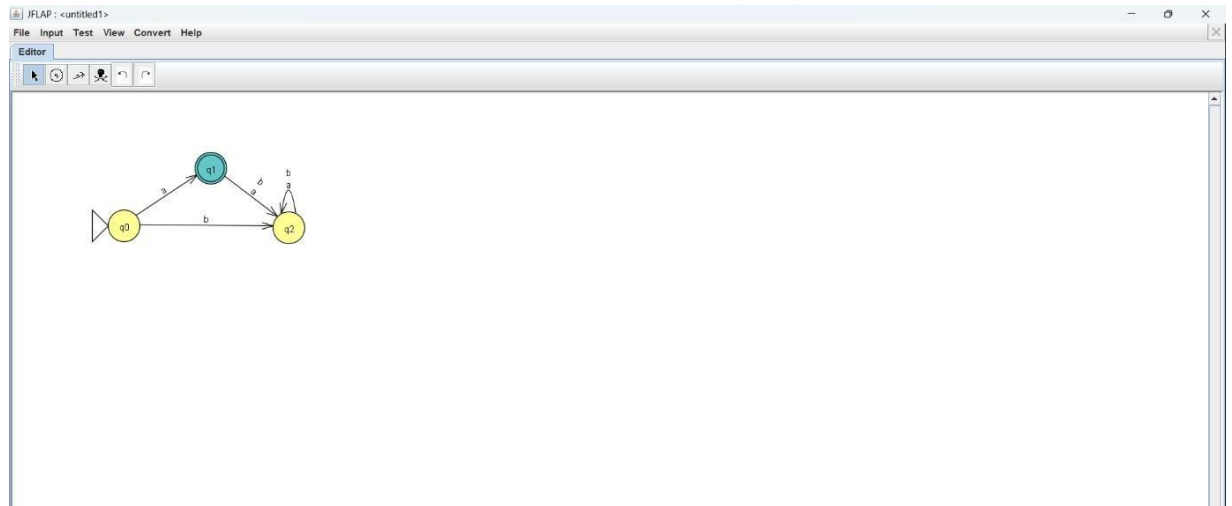
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# INDEX

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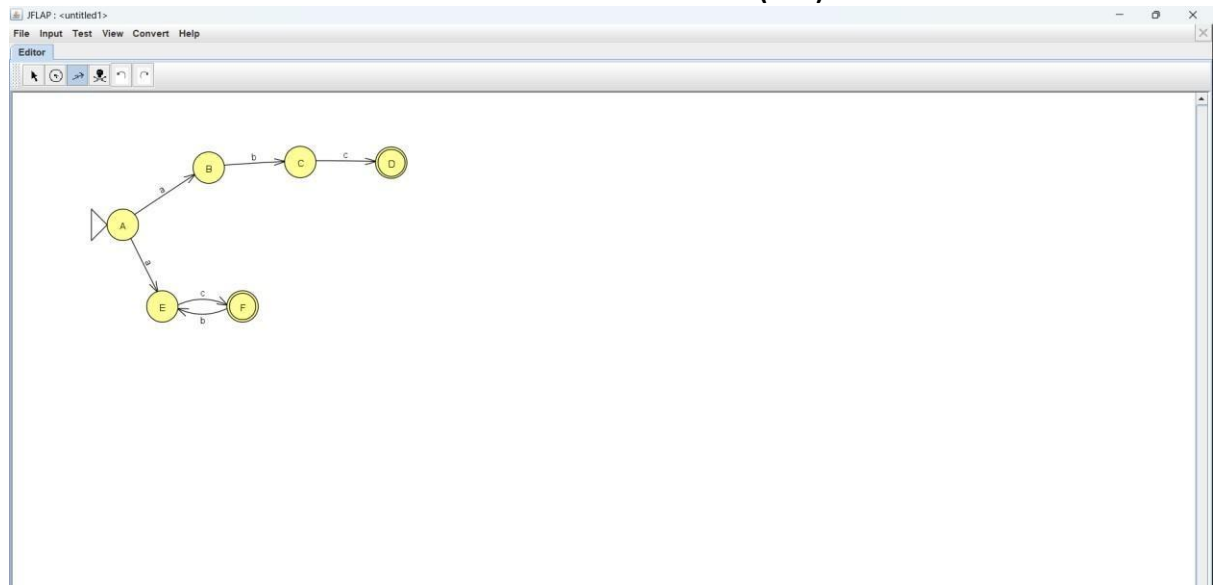
# LAB PROGRAM-1

## Deterministic Finite Automata (DFA)



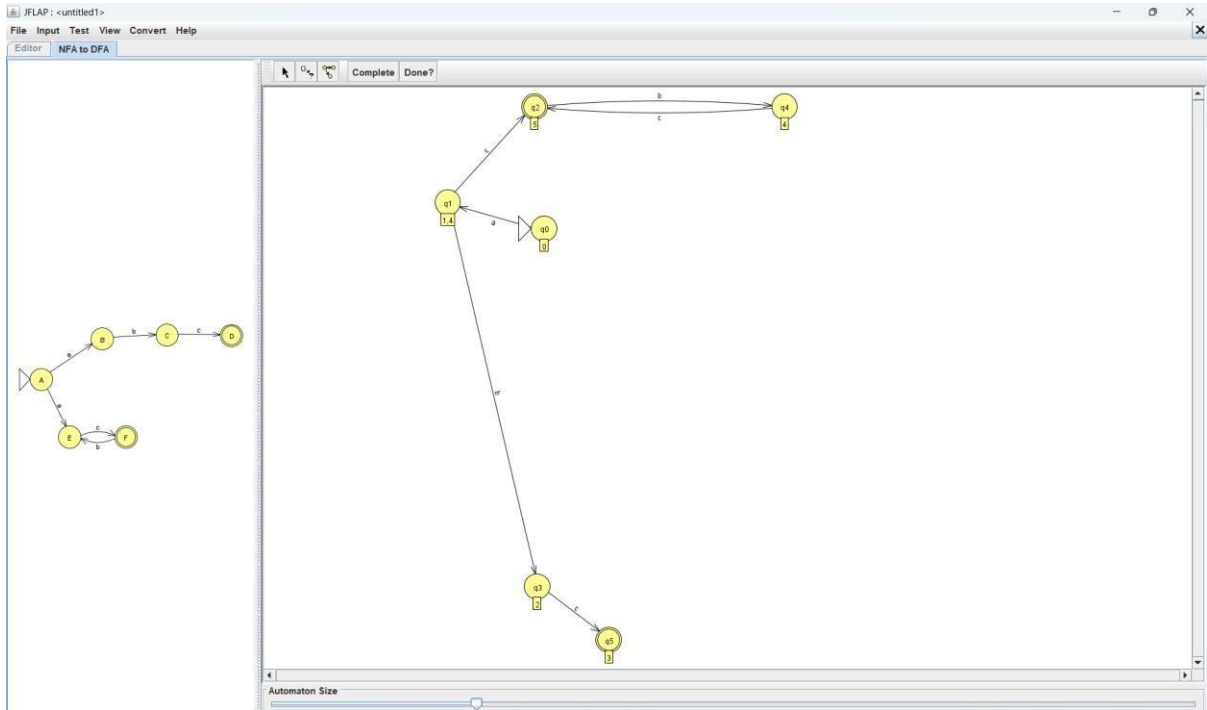
# LAB PROGRAM-2

## Nondeterministic Finite Automata (NFA)



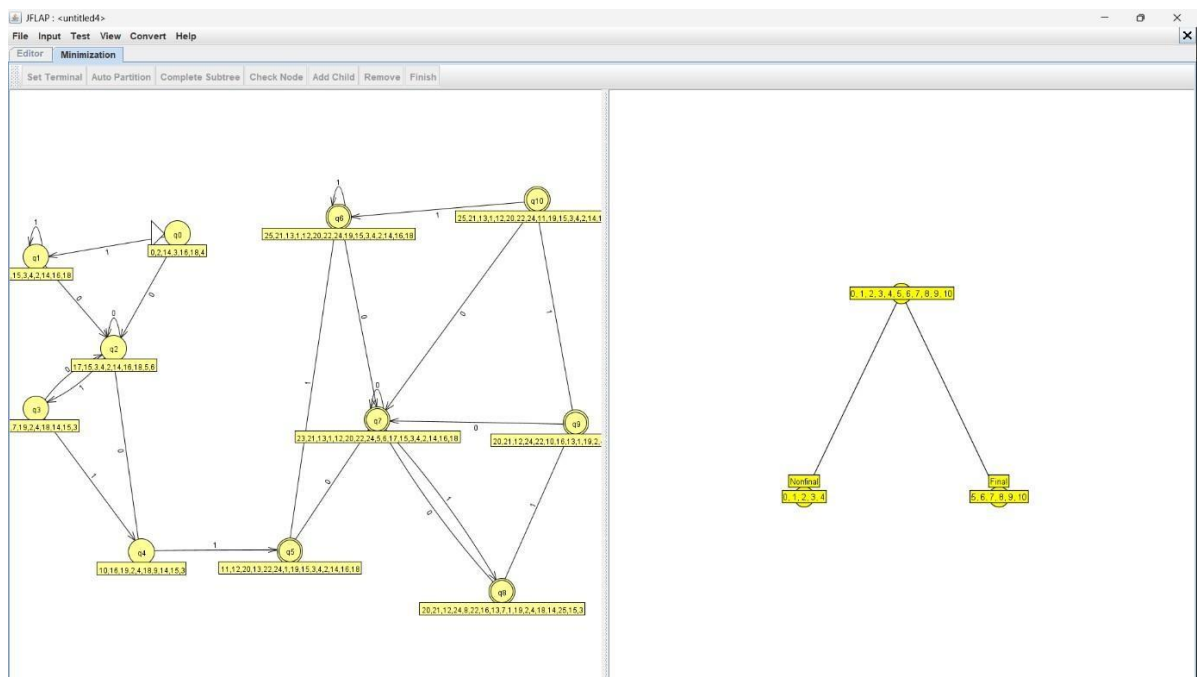
# LAB PROGRAM-3

## Conversion of NFA to DFA



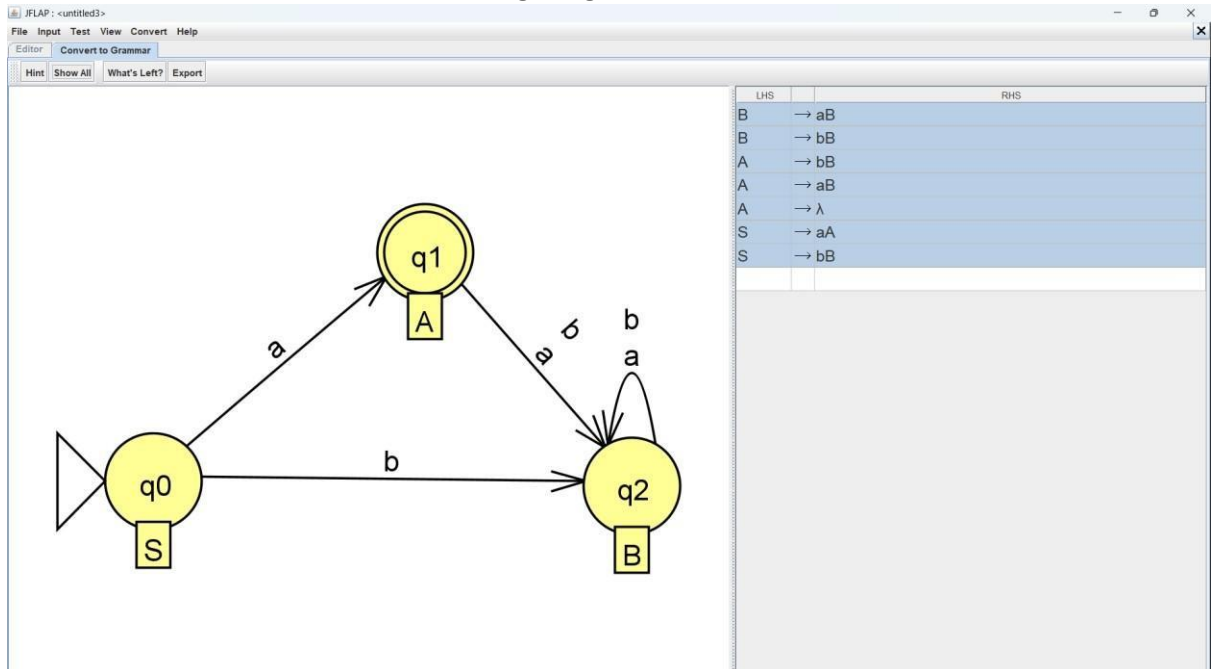
# LAB PROGRAM-4

## DFA Minimization



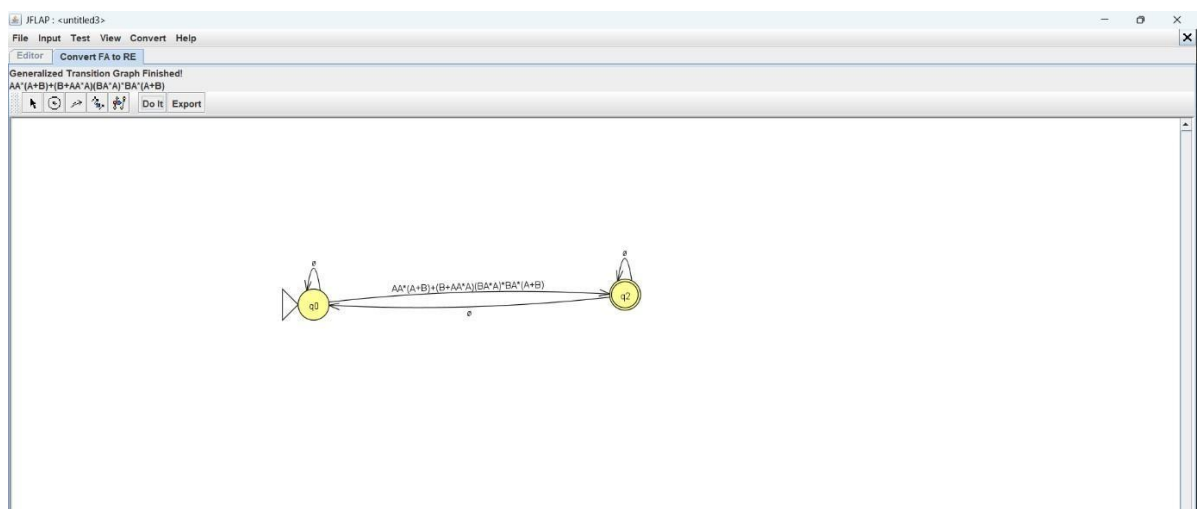
# LAB PROGRAM-5

## DFA to regular grammar conversion



# LAB PROGRAM-6

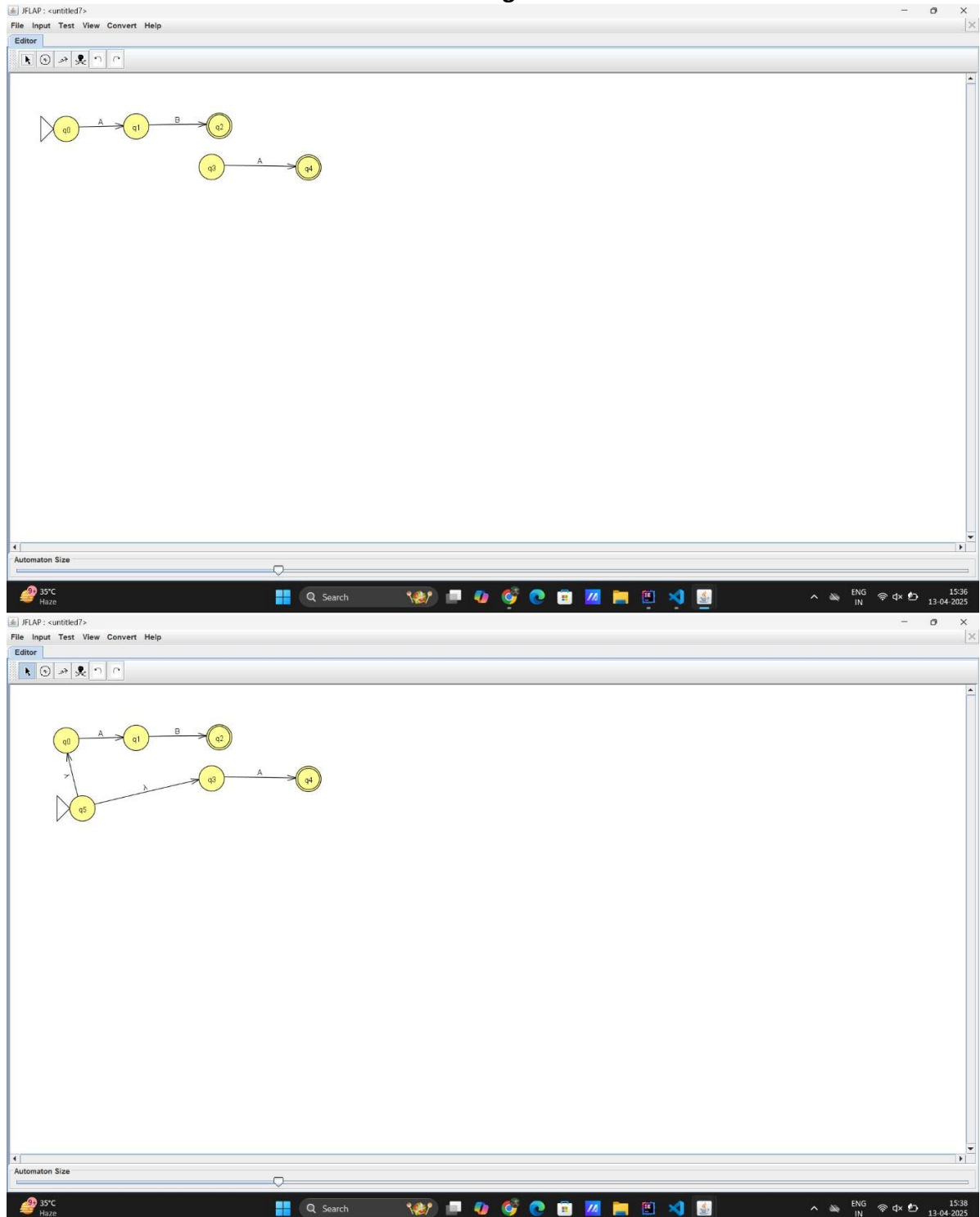
## DFA to regular expression conversion





# LAB PROGRAM-7

## Combining automata



# LAB PROGRAM-8

## Regular expression to DFA conversion

JFLAP: <untitled5>

File Convert Help

Editor

Edit the regular expression below:

$(a^*b(a^*))$

Input Field Text Size (For optimization, adjust the size of this window after resizing the text field)

31°C Haze 09:55 20-04-2025

JFLAP: <untitled5>

File Convert Help

Editor Convert RE to NFA

The automaton is complete.  
"Export" will put it in a new window.

Do Step Do All Export

Automaton Size

31°C Haze 09:55 20-04-2025

**Compiler Design**  
**Course Code: R1UC627B**

**Lab File**

**For**

**BACHELOR OF**  
**ENGINEERING & TECHNOLOGY**



**SCHOOL OF COMPUTER SCIENCE AND ENGINEERING**  
**GALGOTIAS UNIVERSITY, GREATER NOIDA**  
**UTTAR PRADESH**

**Student Name: Anish Raj**

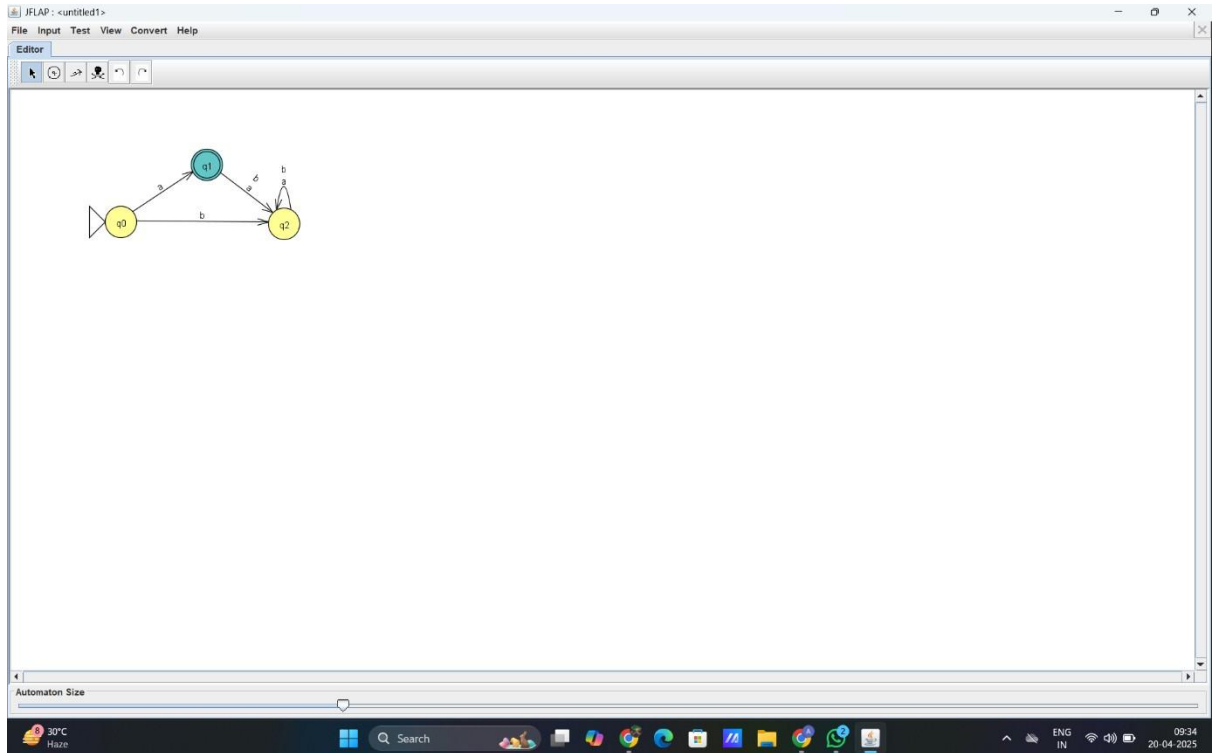
**Admission No: 22SCSE1180188**

**Semester: VI**

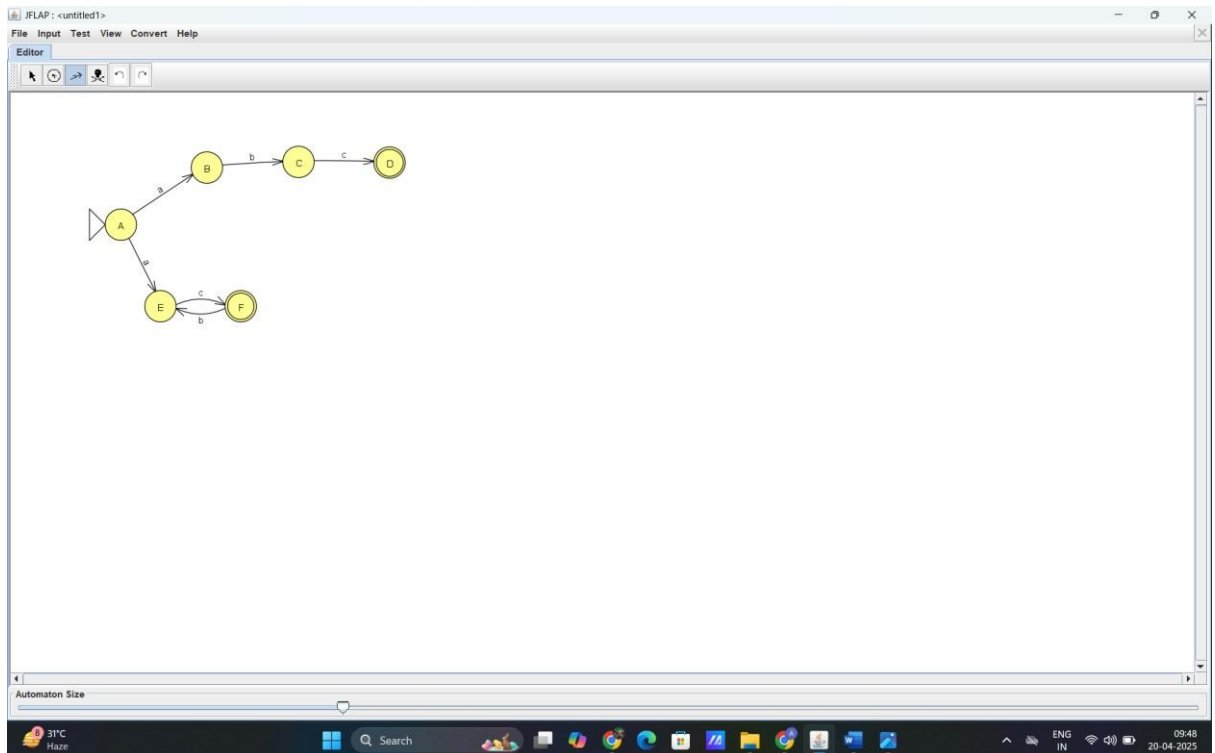
**Submitted To: Mr. Himanshu Sharma**

# Compiler Design

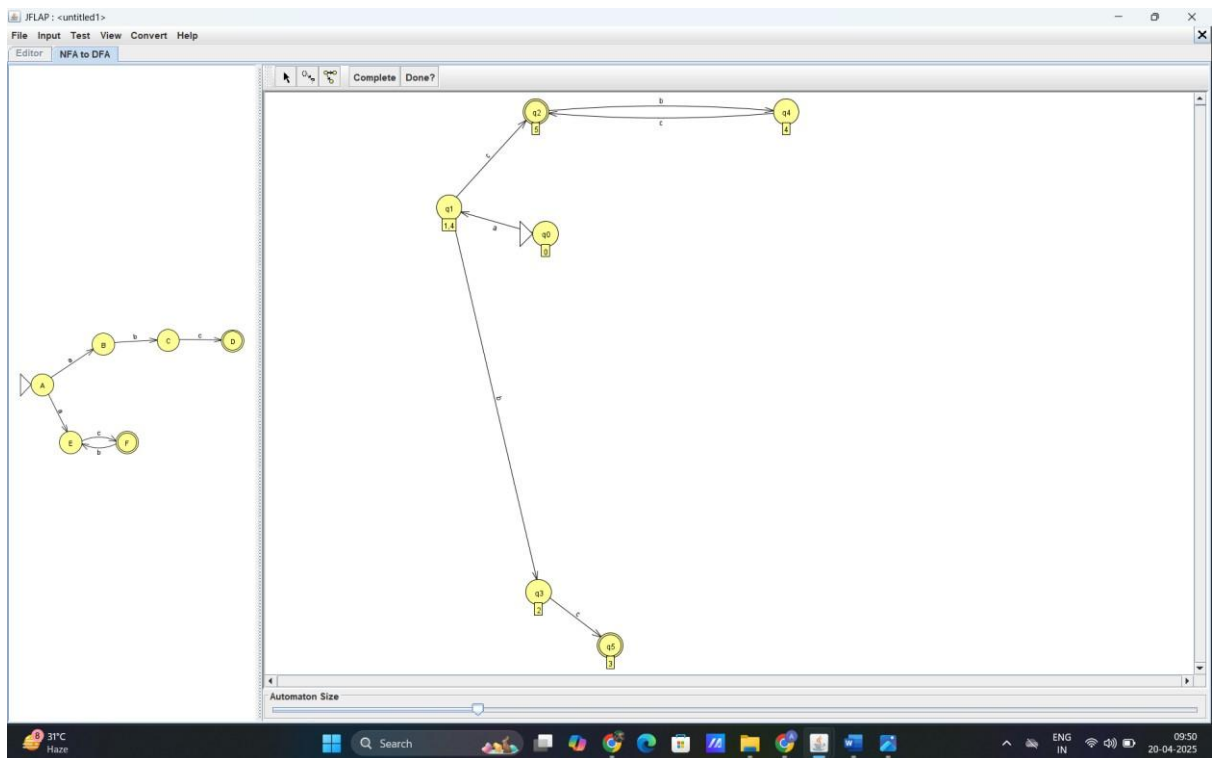
## 1. Deterministic Finite Automata (DFA)



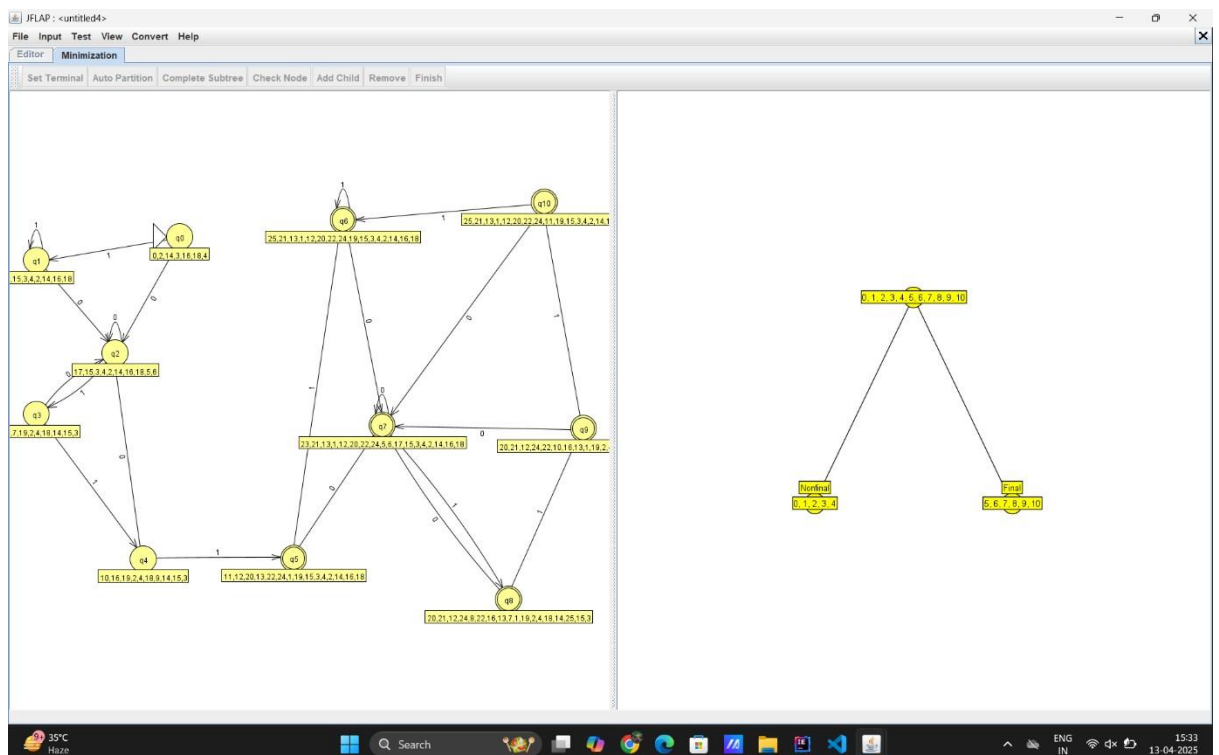
## 2. Nondeterministic Finite Automata (NFA)



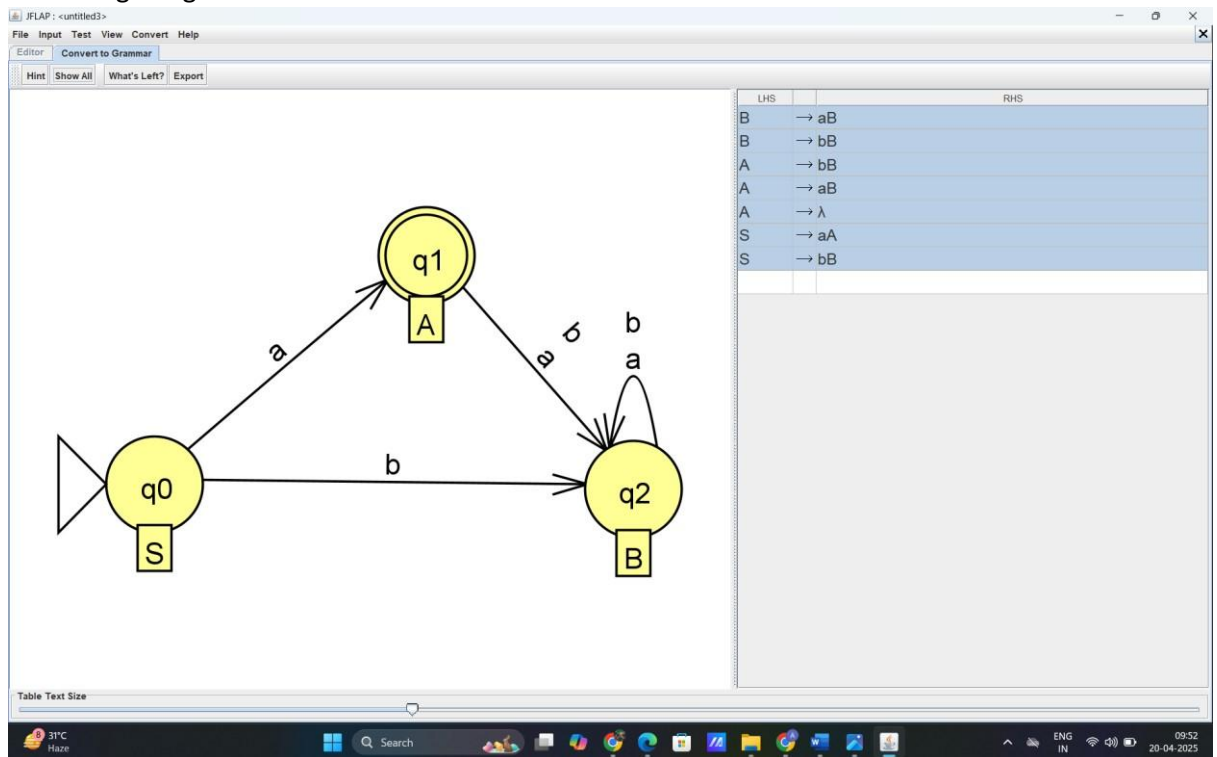
### 3. Conversion of NFA to DFA



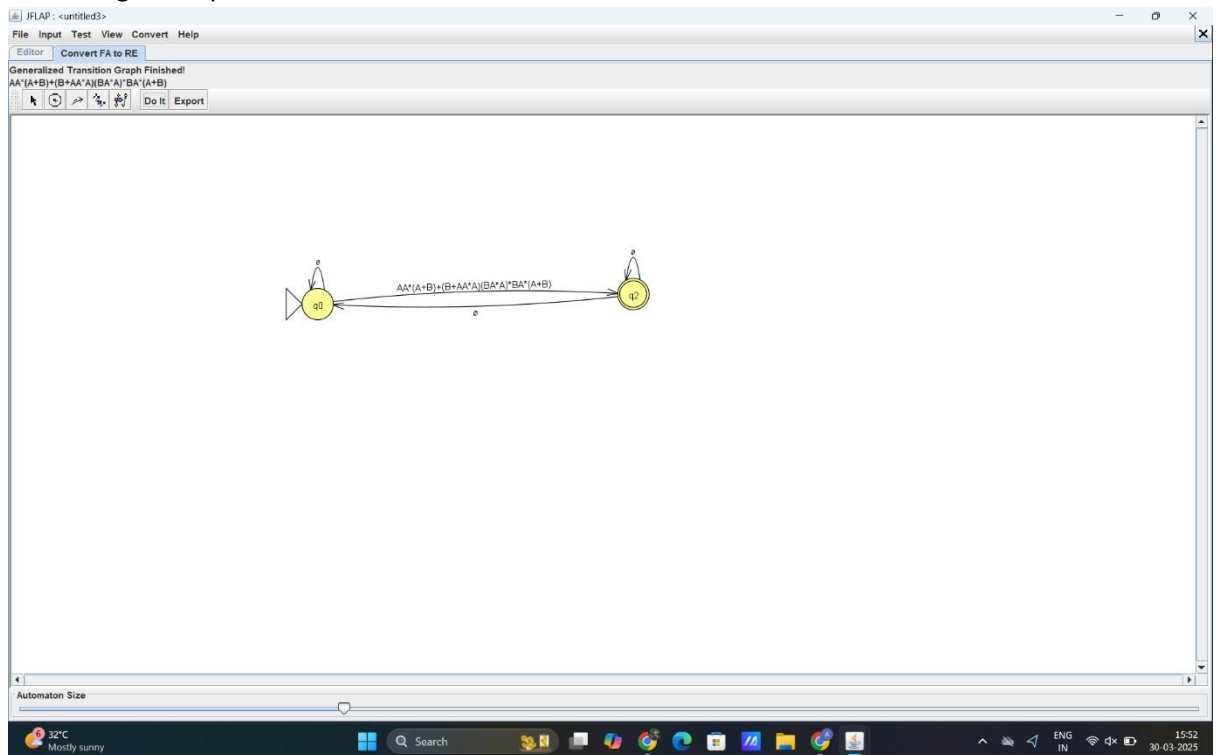
### 4. DFA Minimization



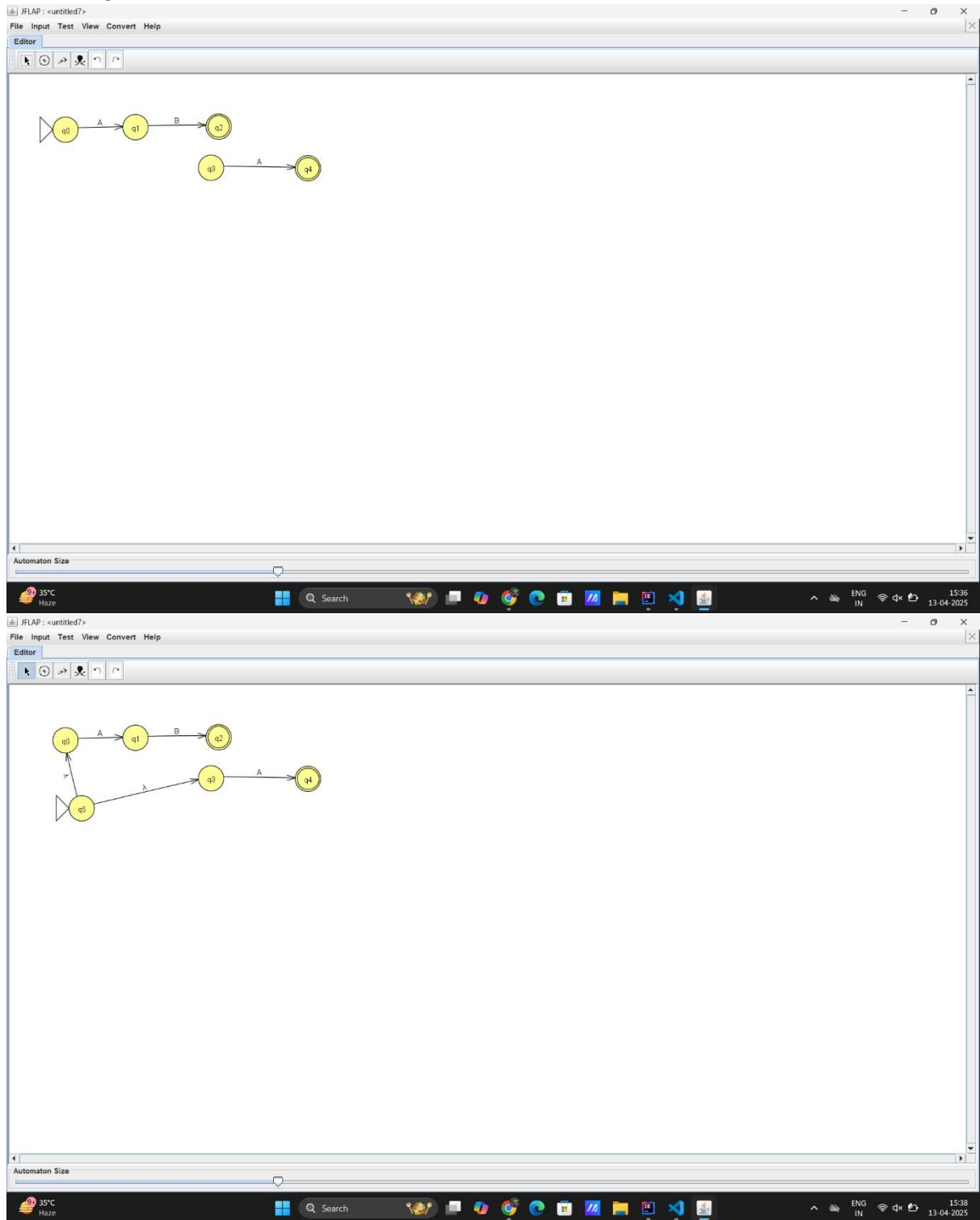
## 5. DFA to regular grammar conversion



## 6. DFA to regular expression conversion



## 7. Combining automata



## 8. Regular expression to DFA conversion

