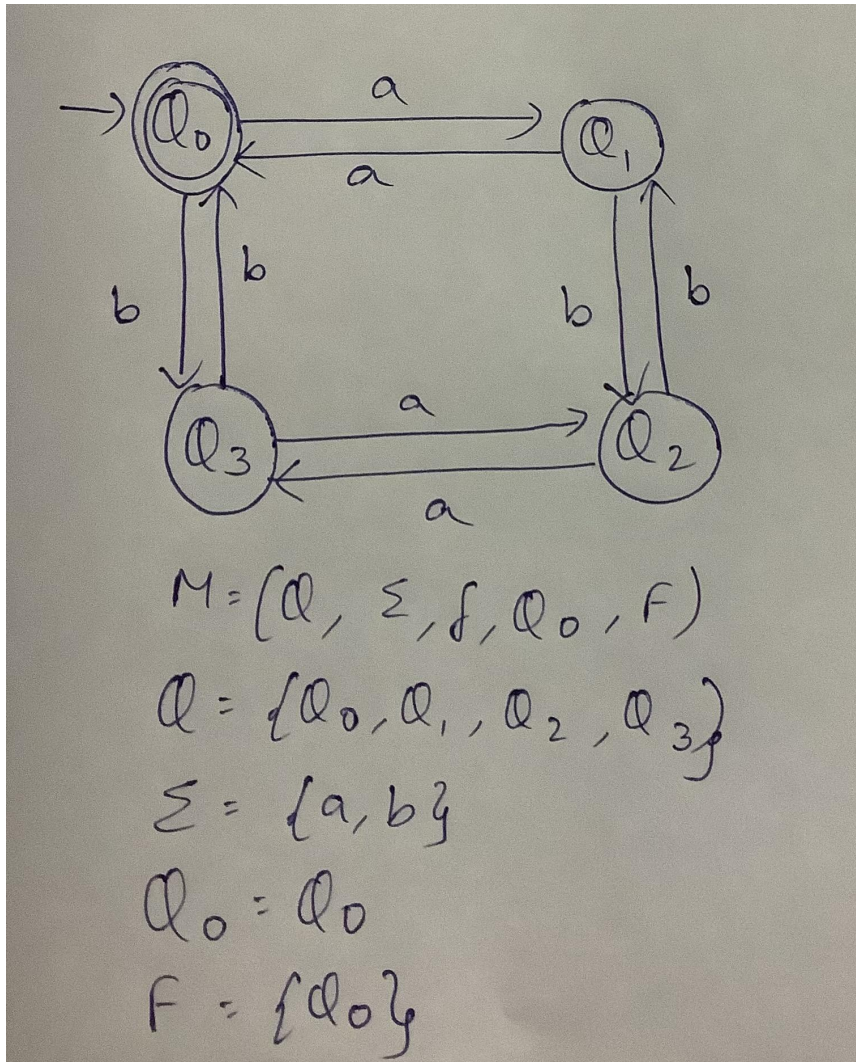
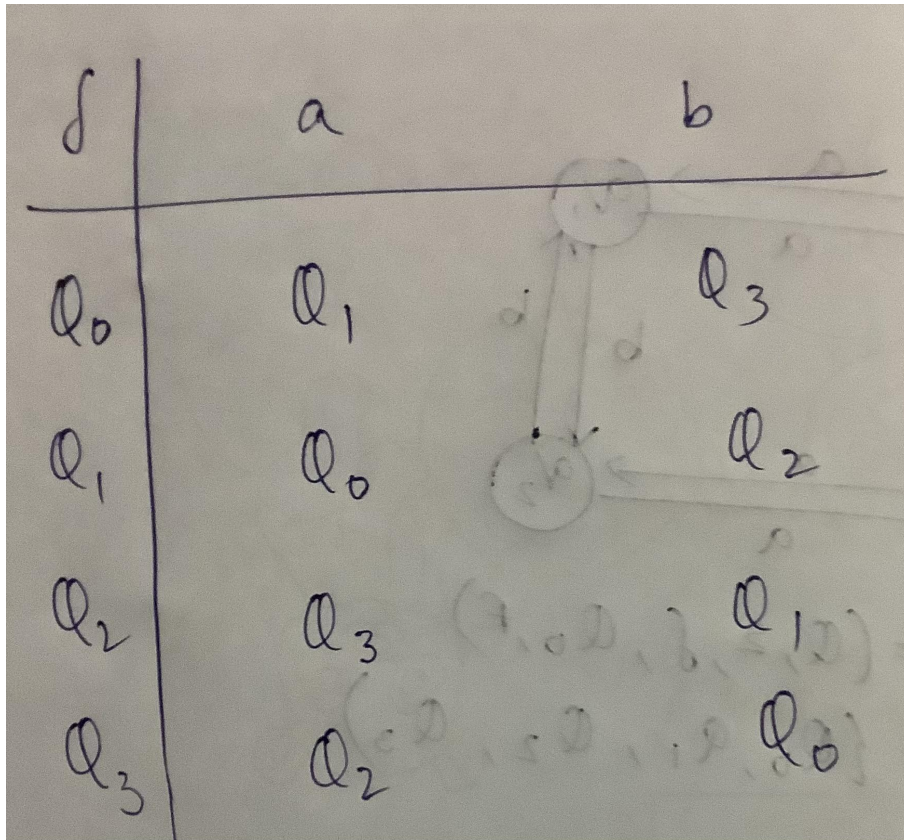


## Week 1: Implementation of Language recognizer

**Program 1 - Implementation of Language recognizer for a set of all strings over input alphabet  $\Sigma=\{a,b\}$  containing even number of a's and even number of b's.**

**DFA of the language -**





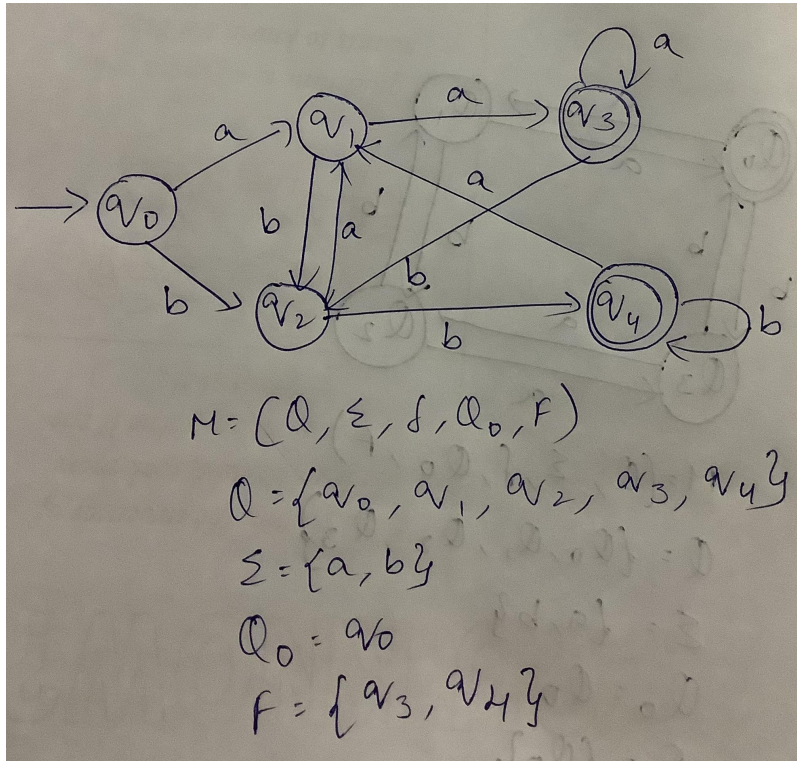
### Test Cases -

| Input     | Expected Output     |
|-----------|---------------------|
| aabb      | String accepted     |
| ababbbbaa | String accepted     |
| bab       | String not accepted |
| abcd      | Invalid symbol      |

**Source Code -** [Language recognizer for accepting strings containing even no. of a's and even no. of b's](#)

**Program 2 - Implementation of Language recognizer for a set of all strings over input alphabet  $\Sigma=\{a,b\}$  ending with two symbols of the same type.**

**DFA of the language -**



| $\delta$ | a     | b     |
|----------|-------|-------|
| $q_0$    | $q_1$ | $q_2$ |
| $q_1$    | $q_3$ | $q_2$ |
| $q_2$    | $q_1$ | $q_4$ |
| $q_3$    | $q_3$ | $q_2$ |
| $q_4$    | $q_1$ | $q_4$ |

### Test Cases -

| Input | Expected Output     |
|-------|---------------------|
| abb   | String accepted     |
| abaaa | String accepted     |
| abab  | String not accepted |
| abcd  | Invalid symbol      |

**Source Code -** [Language Recognizer for accepting strings containing the same symbol at the end](#)