**Chapter 4: MINIMIZATION TECHNIQUES**

**Topic – 1: Minimization Of DFA**

**Aim**

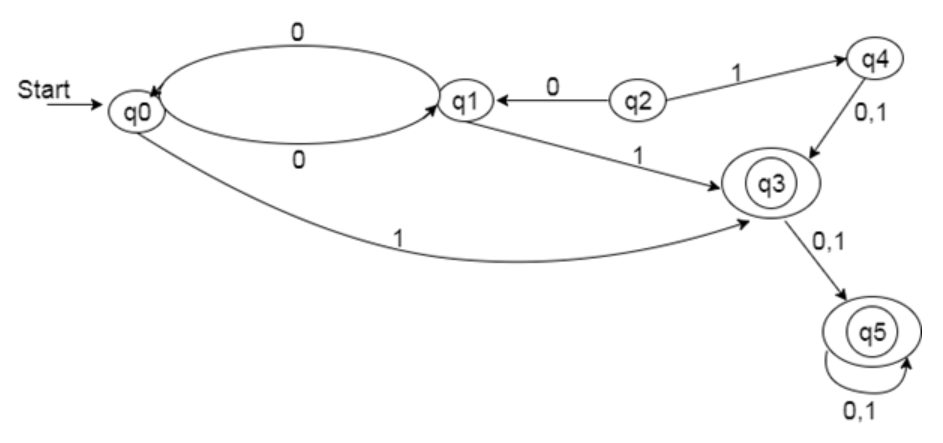
* We get **finite state machine** (**FSM**) with redundant states, after minimization.

**Steps Involved**

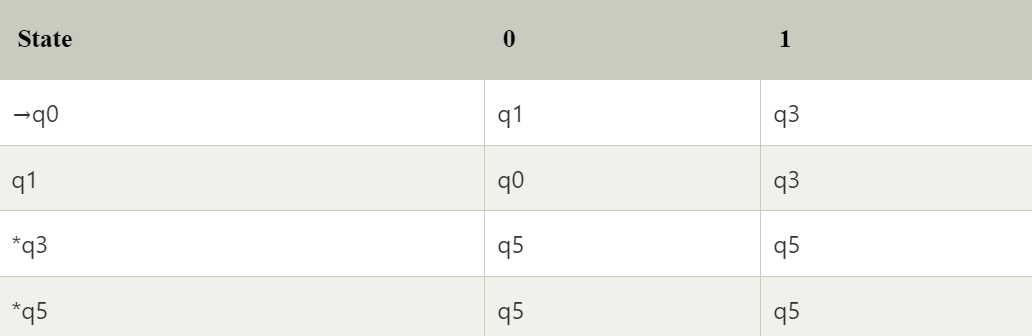
* **Step 1:** **Remove** all the **unreachable states**.
* **Step 2:** Draw the **transition table**.
* **Step 3:** **Split the table** into two tables, **T1** containing **final states** & **T2** containing **rest** of the states.
* **Step 4:** Find rows from **T1** which are transitioning to **same state** or **set of states**, for receiving **all** the input symbols.
* **Step 5:** **Remove** one of those rows.
* **Step 6:** Keep doing it for **each common rows** found.
* **Step 7:** Now combine **T1** and **T2**.
* **Step 8:** Draw the **state diagram** as per the final obtained table.

**Example**

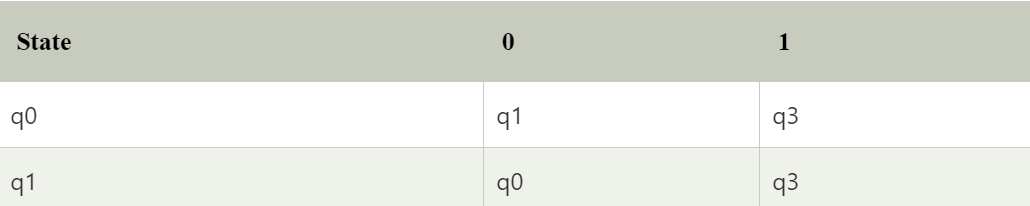
**Initial DFA:**

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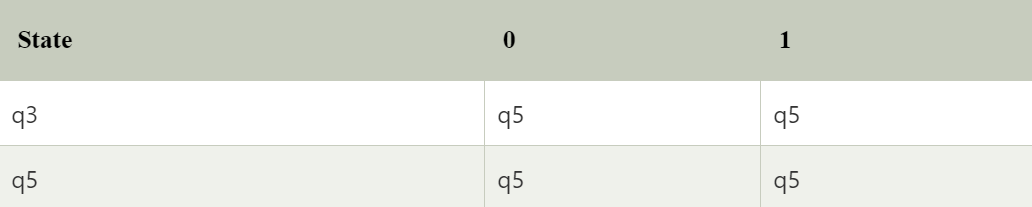
**Initial table:**

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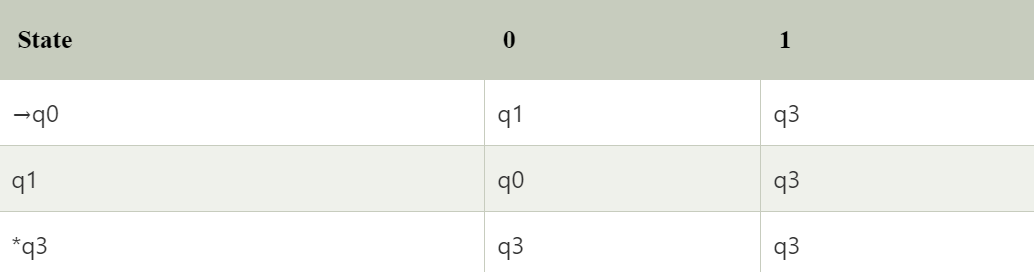
**T1:**

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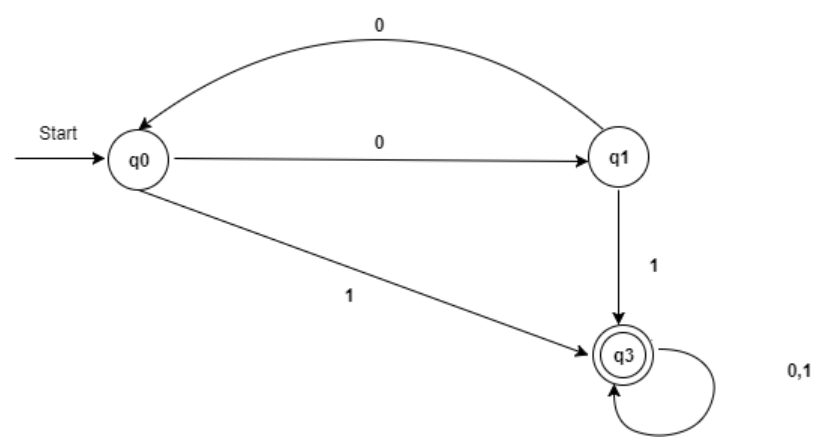
**T2:**

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**Final table:**

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**Final DFA:**

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