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PROGRAMMING ASSIGNMENT #0-M

B. L = {W ϵ {a, b }* | W has both **_ba_** and **_ab_** as substrings}

Deterministic Finite Automata (DFA)
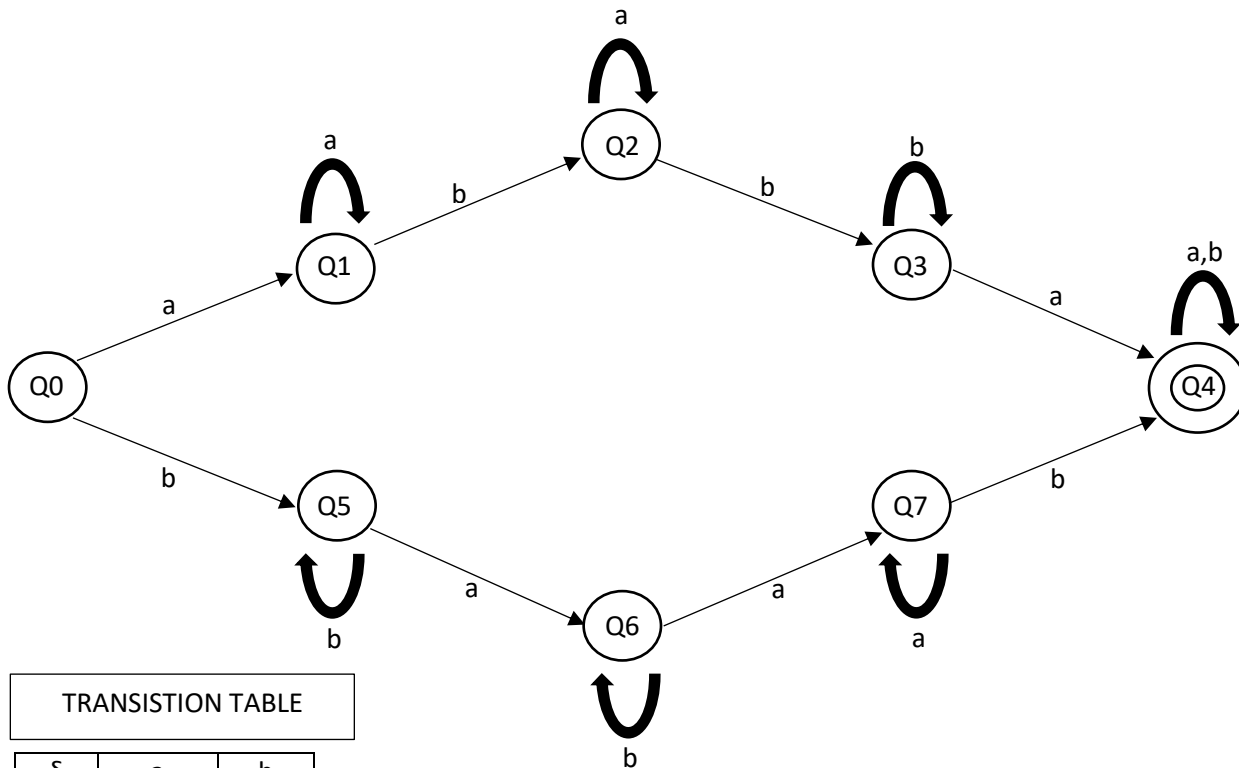
TRANSISTION TABLE		
δ	a	b
Q0	Q1	Q5
Q1	Q1	Q2
Q2	Q2	Q3
Q3	Q4	Q3
Q4	Q4	Q4
Q5	Q6	Q5
Q6	Q7	Q6

M = {Q0,Q1,Q2,Q3,Q4,Q5,Q6,Q7},{a,b},δ,q0,{Q4}

SPL (b) SOURCE CODE

```cpp
#include<iostream>
using namespace std;

int main()
{
    int j=0, state=0;
    int table[8][2]={{1,5},{1,2},{2,3},{4,3},{4,4},{6,5},{7,6},{4,4}};
    int input;
    int flag=0;
    char st[100];
    cin>>st;
    while(st[j]!='\0')
    {
        switch (st[j])
        {
            case'a':
                input=0;
                break;
            case'b':
                input=1;
                break;
        }
        state=table[state][input];
        if(state==4)
        {
            flag=1;
            break;
        }
        j++;
    }

    if(flag==1)
    {
        cout<<"Accepted";
    }
    else
    {
        cout<<"Not Accepeted";
    }
    return 0;
}
```