# System Software

# Lab Assignment – 1

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Ques: 1. Write a program to convert Regular Expression to DFA.

Ans:

#include <bits/stdc++.h>

using namespace std;

void DFA(string str, int N)

{

    // If n <= 1, then print No

    if (N <= 1)

    {

        cout << "given string not belong to DFA";

        return;

    }

    int count = 0;

    if (str[0] == 'C')

    {

        count++;

        // Traverse the rest of string

        for (int i = 1; i < N; i++)

        {

            if (str[i] == 'A' || str[i] == 'B')

                count++;

            else

                break;

        }

    }

    else

    {

        cout << "given string not belong to DFA";

        return;

    }

    if (count == N)

        cout << "given string belong to DFA";

    else

        cout << "given string not belong to DFA";

}

int main()

{

    string str;

    cout << "Enter the input: ";

    cin >> str;

    int N = str.size();

    DFA(str, N);

    return 0;

}

**Output:**

