2.write a c program to simulate a non-dfa for given language.

program:

#include <string.h>

#define NUM\_STATES 2

#define ALPHABET\_SIZE 2

int transition[NUM\_STATES][ALPHABET\_SIZE] = {

{0, 1},

{0, 1}

};

int initialState = 0;

int acceptingStates[] = {0};\

bool isAcceptingState(int state) {

for (int i = 0; i < sizeof(acceptingStates) / sizeof(acceptingStates[0]); i++) {

if (state == acceptingStates[i]) {

return true;

}

}

return false;

}

int main() {

char input[100];

printf("Enter an input string (0s and 1s): ");

scanf("%s", input);

int currentState = initialState;

int inputLength = strlen(input);

for (int i = 0; i < inputLength; i++) {

char symbol = input[i];

int symbolIndex = symbol - '0';

if (symbolIndex < 0 || symbolIndex >= ALPHABET\_SIZE) {

printf("Invalid symbol in the input string: %c\n", symbol);

return 1;

}

currentState = transition[currentState][symbolIndex];

}

if (isAcceptingState(currentState)) {

printf("Accepted\n");

} else {

printf("Rejected\n");

}

return 0;

}

output:

