9.Write a C program to simulate a Non-Deterministic Finite Automata (NFA) for the given language representing strings that start with o and end with 1

AIM: To write a C program to simulate a Non-Deterministic Finite Automata (NFA) for the given language representing strings that start with o and end with 1

ALGORITHM:

1.Define the NFA transitions: Define the states of the NFA and the transitions between them based on the language requirements.

2.Create a function to simulate the NFA: Write a function that takes a string as input and simulates the NFA by following the transitions.

PROGRAM:

#include <stdio.h>

int isAccepted(char \*str) {

int currentState = 0;

for (int i = 0; str[i] != '\0'; i++) {

char symbol = str[i];

switch (currentState) {

case 0:

if (symbol == 'o') {

currentState = 1;

}

break;

case 1:

if (symbol == '1') {

currentState = 2;

} else if (symbol == 'o') {

currentState = 1;

}

break;

case 2:

break;

}

}

return currentState == 2;

}

int main() {

char input[100];

printf("Enter a string: ");

scanf("%s", input);

if (isAccepted(input)) {

printf("Accepted\n");

} else {

printf("Not Accepted\n");

}

return 0;

}

OUTPUT:

