EXP NO : 1

AIM:TO determine deterministic finite automata using c compiler

ALGORITHM:

1.draw dfa and construct the transition table & store it in 2d array

2.initialize all variables to process the data

3.get the input from the user & read it

4.refer the transition table for each and every entry

5.if we reach the final state our input is accepted otherwise no

PROGRAM:

#include<stdio.h>

#include<string.h>

#define max 20

int main()

{

int trans\_table[4][2]={{1,3},{1,2},{1,2},{3,3}};

int final\_state=2,i;

int present\_state=0;

int next\_state=0;

int invalid=0;

char input\_string[max];

printf("enter a string");

scanf("%s",input\_string);

int l=strlen(input\_string);

for(i=0;i<l;i++)

{

if(input\_string[i]=='a')

next\_state=trans\_table[present\_state][0];

else if(input\_string[i]=='b')

next\_state=trans\_table[present\_state][1];

else

invalid=l;

present\_state=next\_state;

}

if(invalid==l)

{

printf("invalid input");

}

else if(present\_state==final\_state)

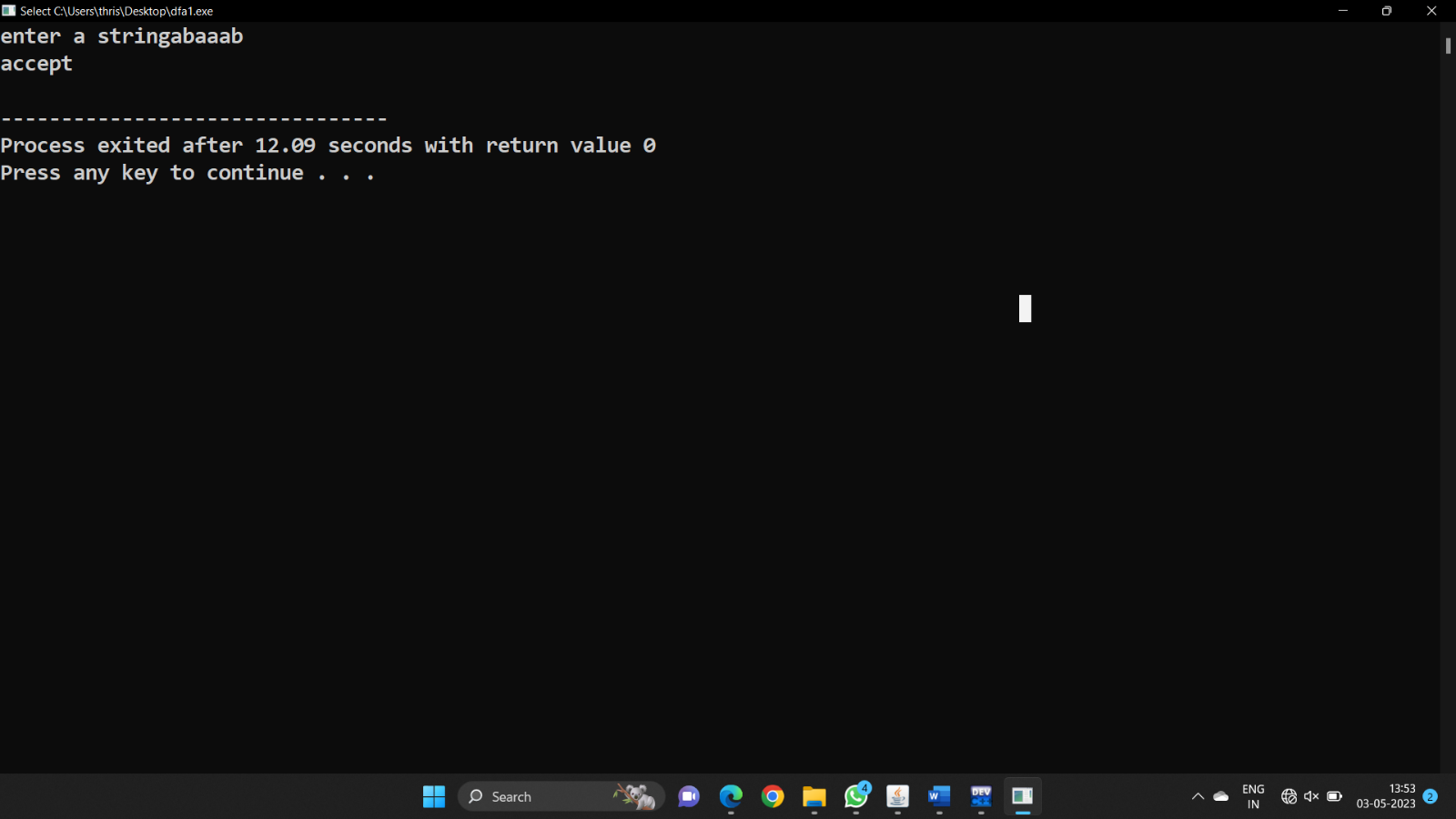
printf("accept\n");

else

printf("dont accept\n");

}

OUTPUT:



RESULT:

Simulation of deterministic finite automata is successful using c compiler