Name – Bhavna Latare

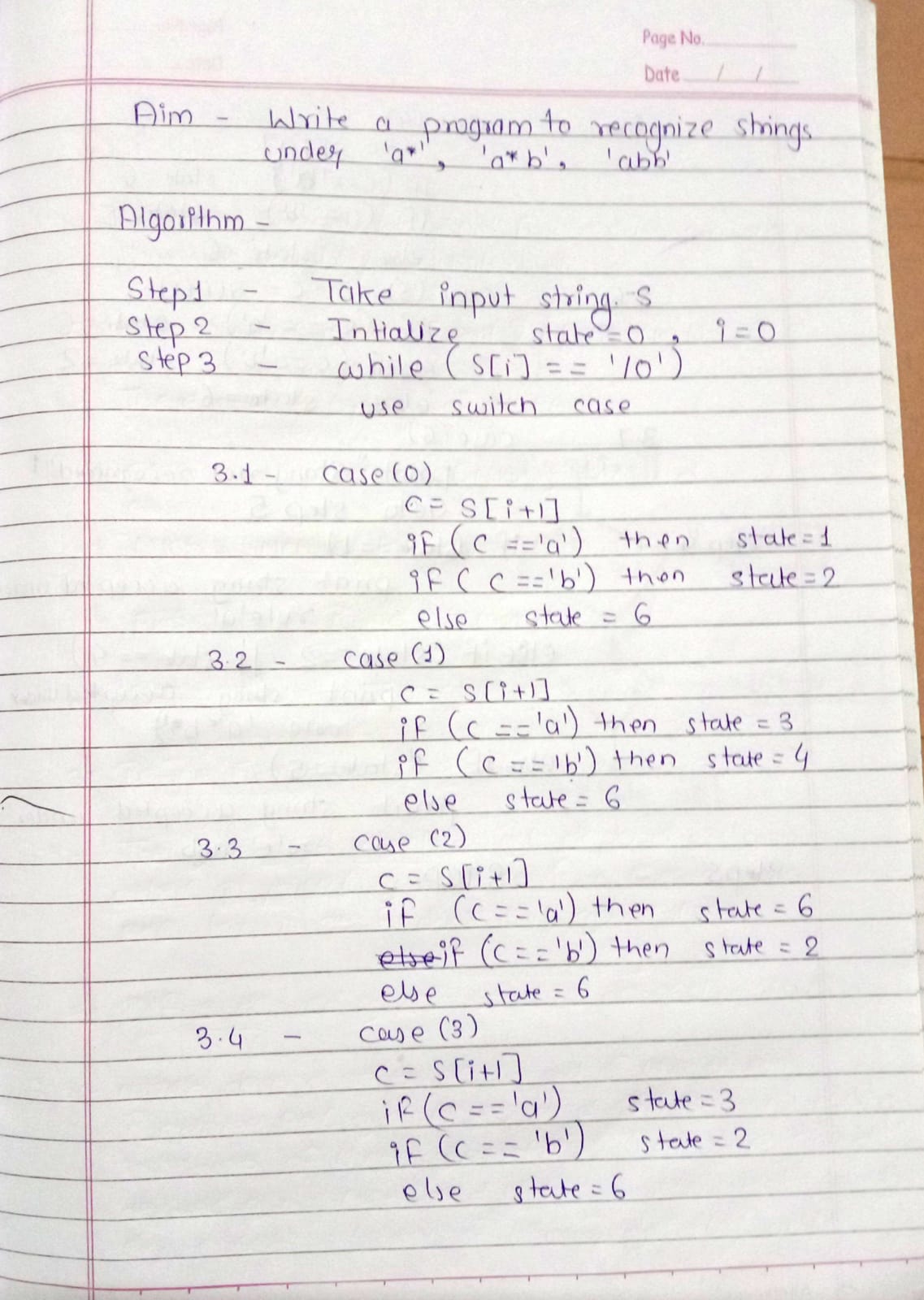
Subject – CO406U

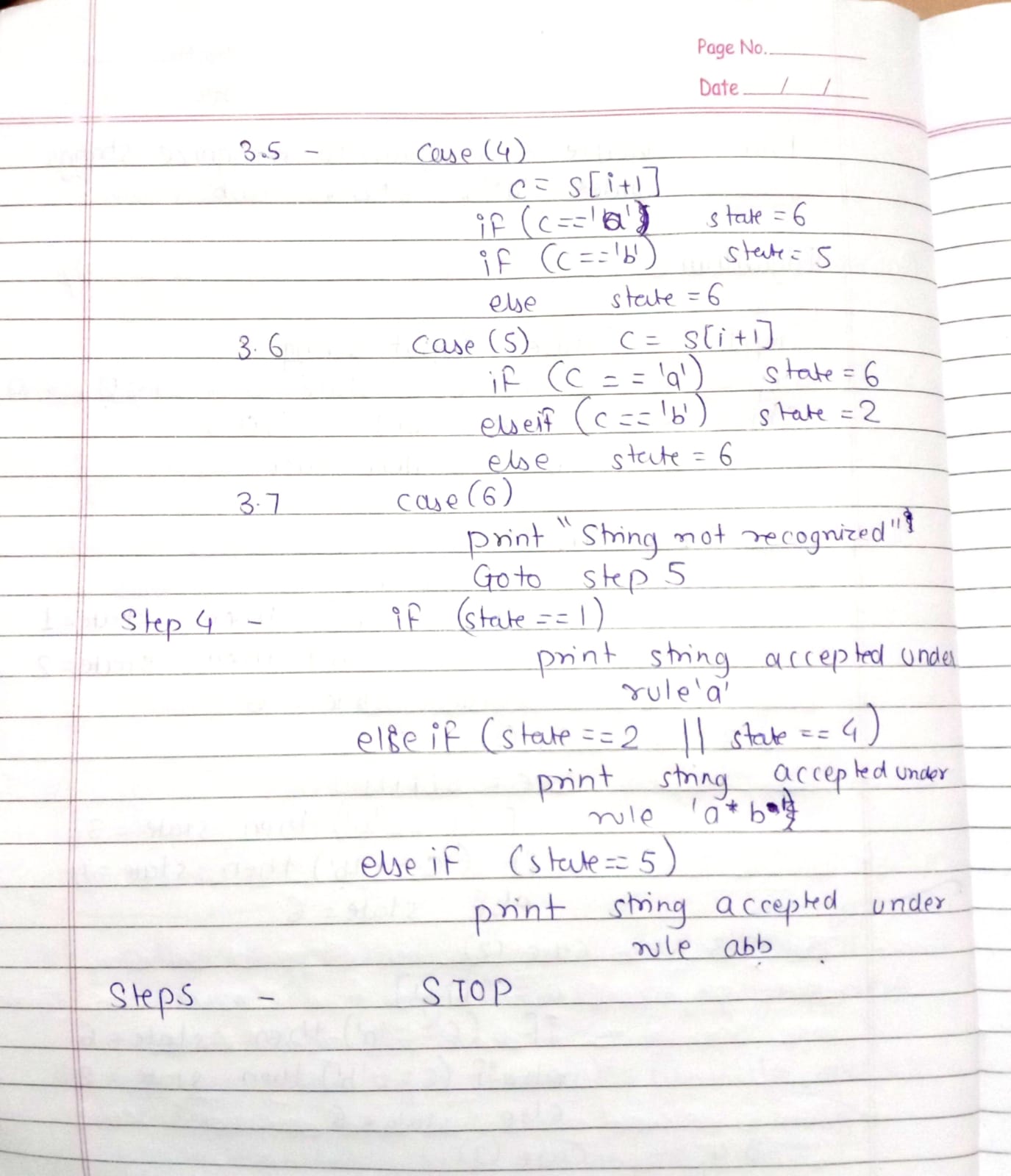
Date- 10 January 2022

**EXTERNAL EXAM**

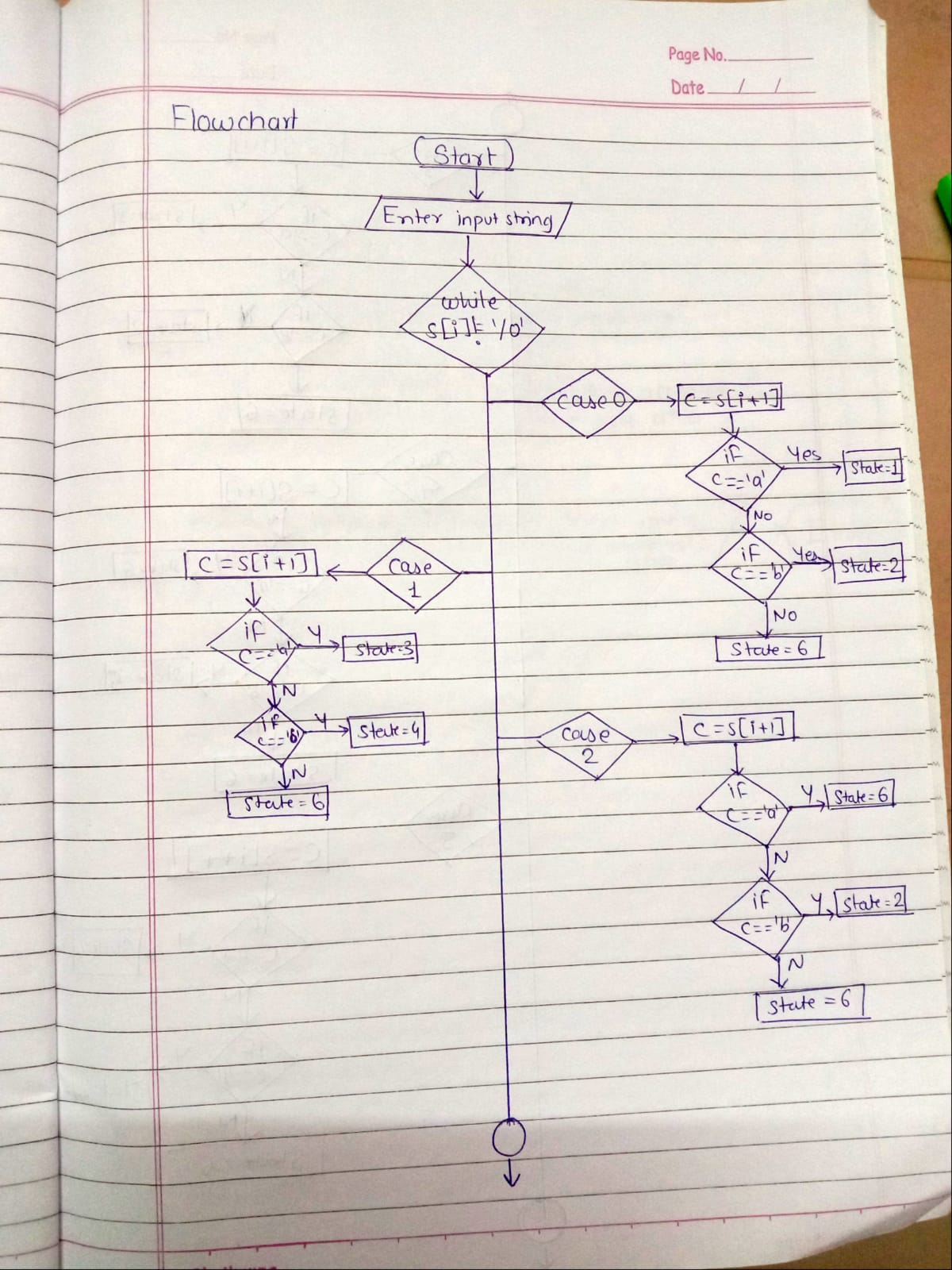
**Aim -** Write a program to recognize strings under ‘a\*’, ‘a\*b+’, ‘abb’.

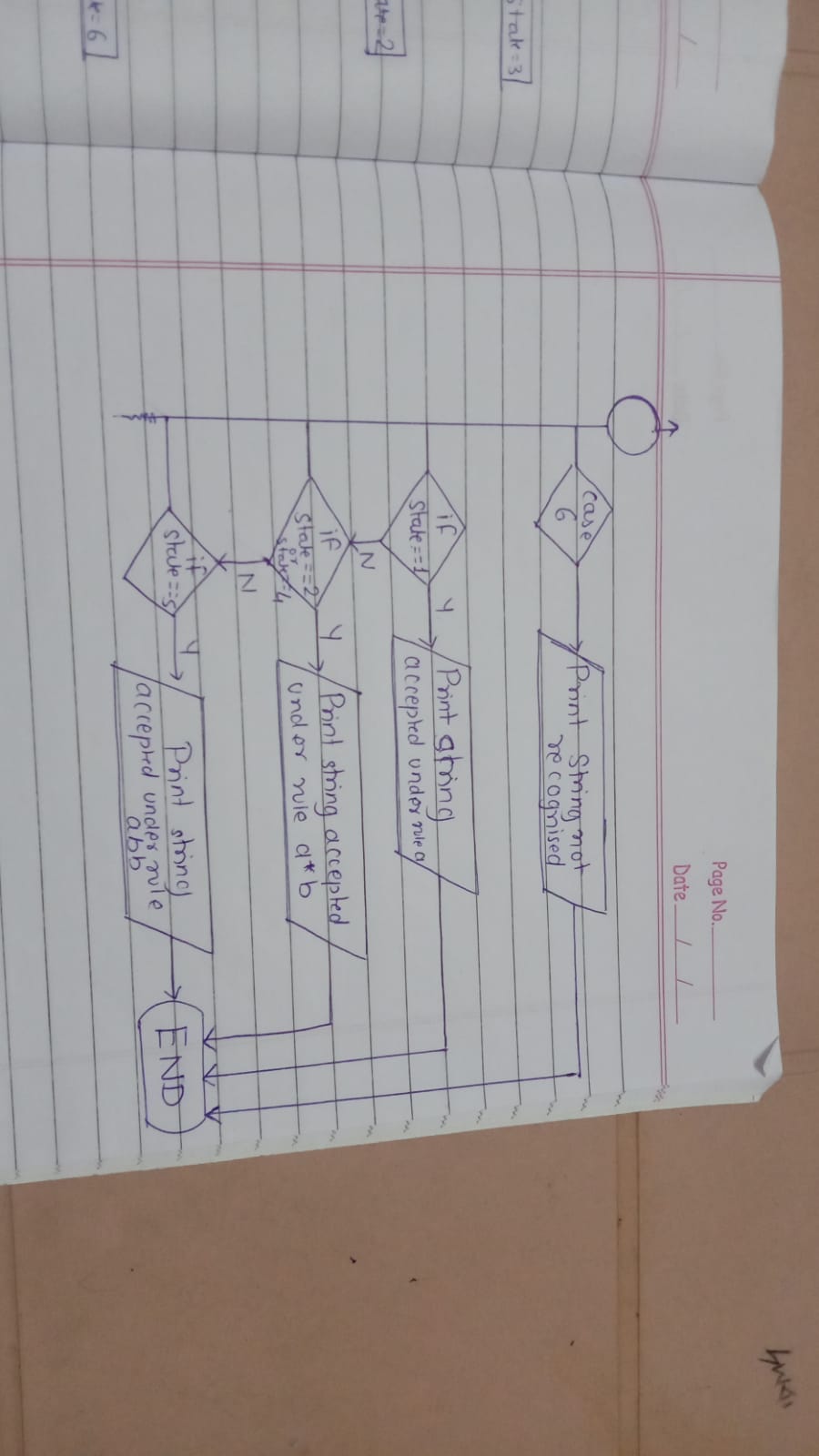
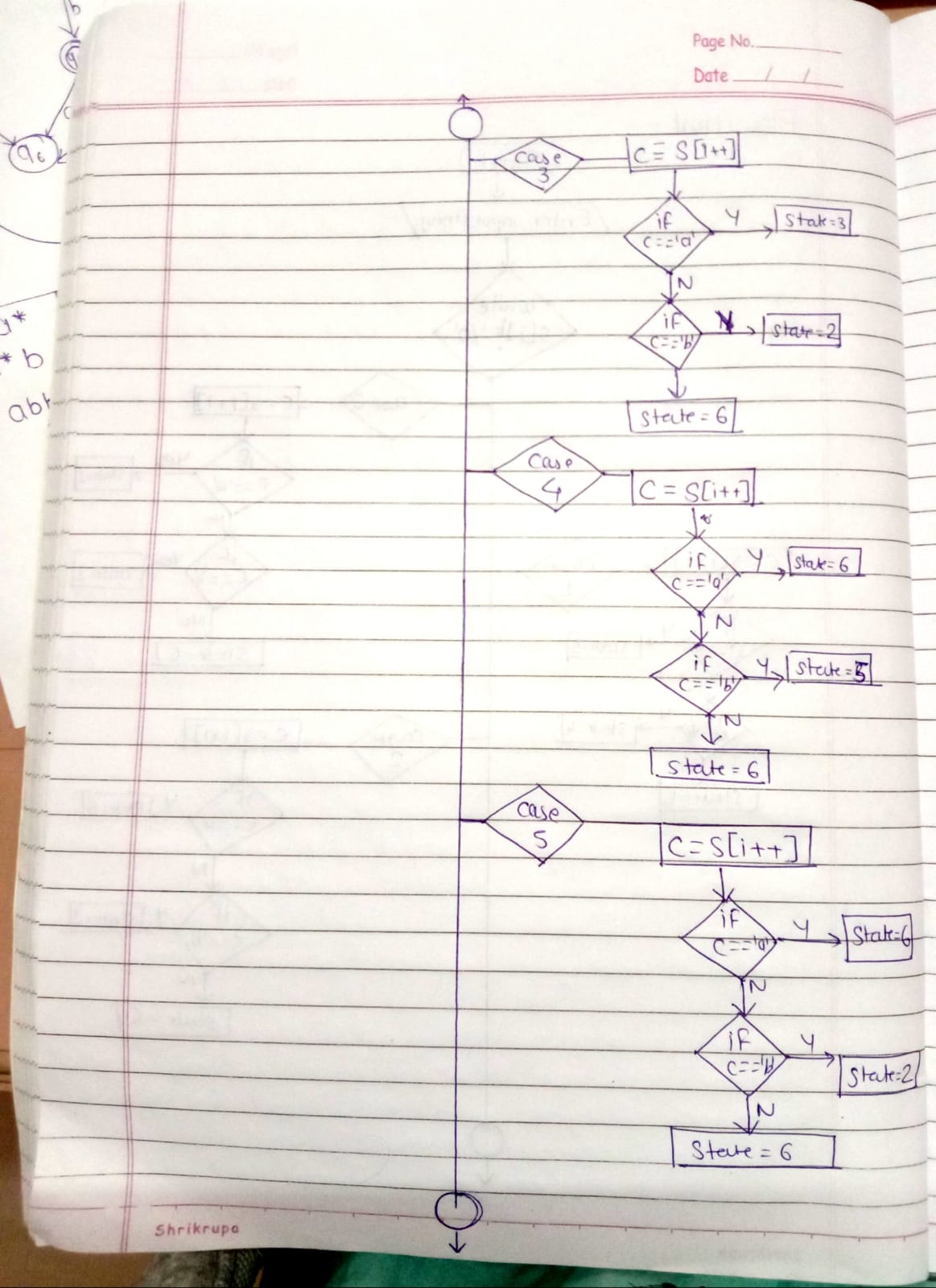
**Algorithm –**

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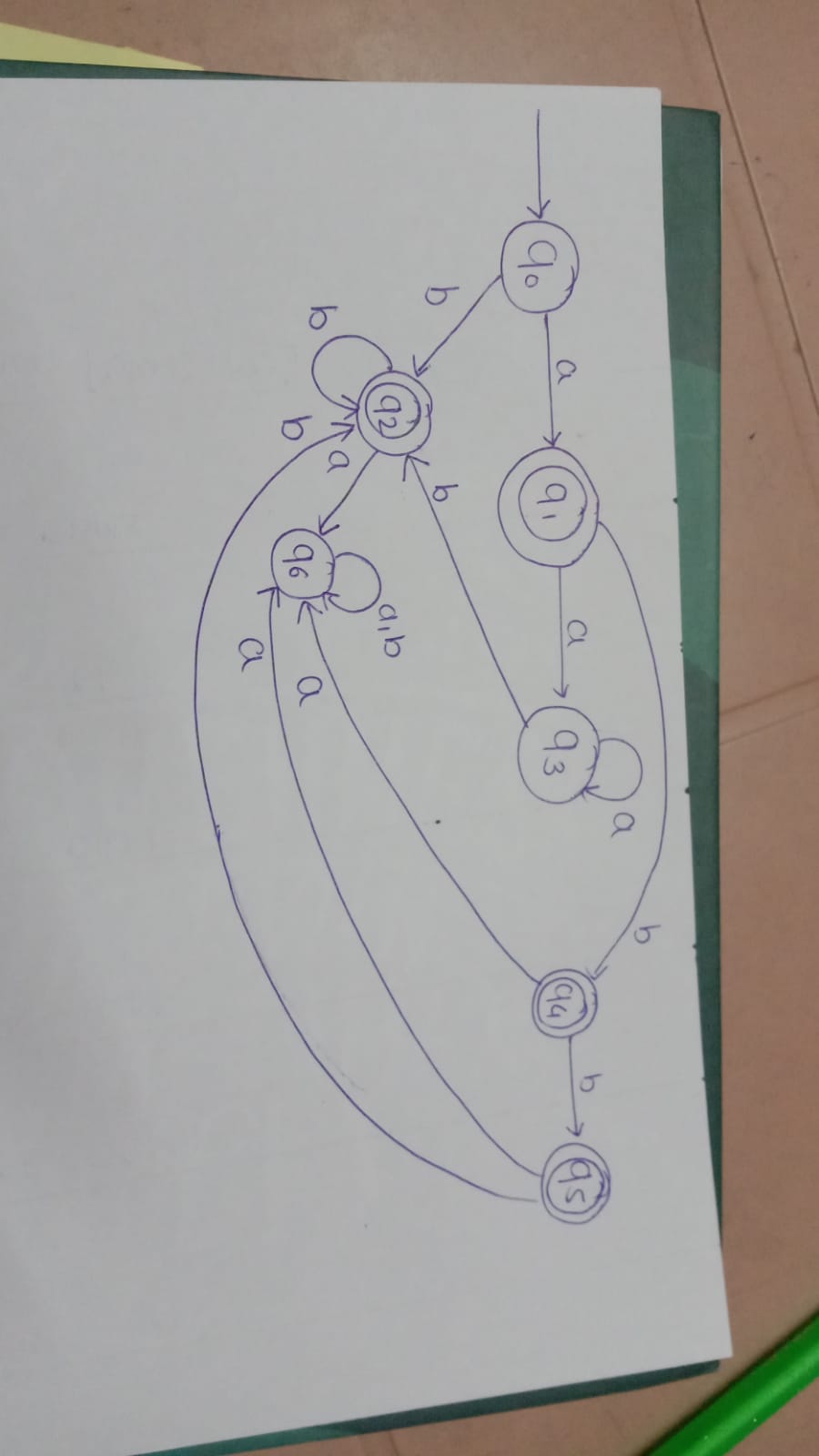
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**Flowchart –**

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**DFA –**

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**Code –**

#include<stdio.h>

#include<string.h>

#include<stdlib.h>

void main()

{

char s[20],c;

int state=0,i=0;

printf("\n Enter a string :- ");

gets(s);

while(s[i]!='\0')

{

switch(state)

{

case 0: c=s[i++];

if(c=='a')

state=1;

else if(c=='b')

state=2;

else

state=6;

break;

case 1: c=s[i++];

if(c=='a')

state=3;

else if(c=='b')

state=4;

else

state=6;

break;

case 2: c=s[i++];

if(c=='a')

state=6;

else if(c=='b')

state=2;

else

state=6;

break;

case 3: c=s[i++];

if(c=='a')

state=3;

else if(c=='b')

state=2;

else

state=6;

break;

case 4: c=s[i++];

if(c=='a')

state=6;

else if(c=='b')

state=5;

else

state=6;

break;

case 5: c=s[i++];

if(c=='a')

state=6;

else if(c=='b')

state=2;

else

state=6;

break;

case 6: printf("\n %s is not Recognised By the Automata.",s);

exit(0);

}

}

if((state==1)||(state==3))

printf("\n %s is Accepted under rule 'a\*'.",s);

else if((state==2)||(state==4))

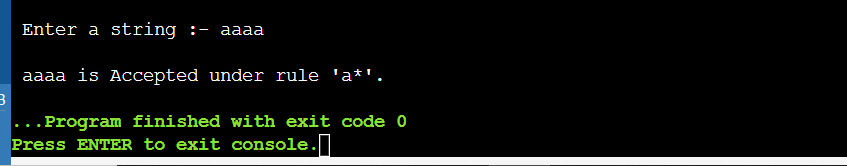
printf("\n %s is Accepted under rule 'a\*b+'.",s);

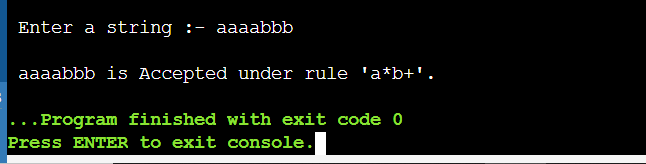
else if(state==5)

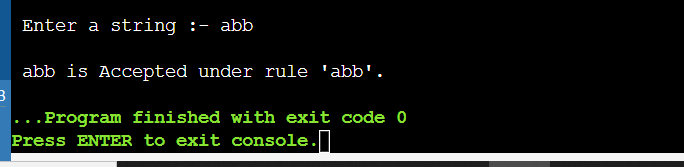
printf("\n %s is Accepted under rule 'abb'.",s);

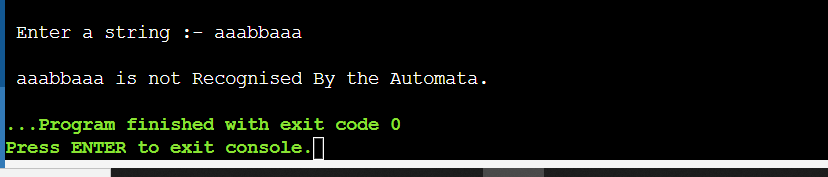
}

**Output –**

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