```c
#include<stdio.h>
#include<string.h>
#include<stdlib.h>
void main()
{
        char s[20],c;
        int state=0,i=0;
        printf("Kindly enter a string:");
        scanf("%s",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.\n",s);
                exit(0);
                }
        }
        if(state==1)
                printf("\n %s is accepted under rule 'a'\n",s);
        else if((state==2)||(state==4))
                printf("\n %s is accepted under rule 'a*b+'\n",s);
        else if(state==5)
                printf("\n %s is accepted under rule 'abb'\n",s);
}
```