

#1

```
#include<stdio.h>
void main()
{
    int state=0,i=0;
    char token,input[20];
    printf("Enter input string \t :");
    scanf("%s",input);
    //printf("Given string is : %s");

    while((token=input[i++])!='\0')
    {
        // printf("current token : %c \n",token);
        switch(state)
        {
            case 0: if(token=='a')
                    state=1;
                    else if(token=='b')
                    state=2;
                    else
                    {
                        printf("Invalid token");
                        exit(0);
                    }
                    break;
            case 1: if(token=='a')
                    state=0;
                    else if(token=='b')
                    state=3;
                    else
                    {
                        printf("Invalid token");
                        exit(0);
                    }

                    break;
```

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        case 2: if(token=='a')
                    state=3;
                else if(token=='b')
                    state=0;
                else
                {
                    printf("Invalid token");
                    exit(0);
                }
                break;
        case 3: if(token=='a')
                    state=2;
                else if(token=='b')
                    state=1;
                else
                {
                    printf("Invalid token");
                    exit(0);
                }
                break;
    }
    // printf("state = %d ",state);
}
if(state==0)
    printf("\n\nString accepted\n\n");
else
    printf("\n\nString not accepted\n\n");
}

```