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1  #include<stdio.h>
2  void main()
3  {
4      int state=0,i=0;
5      char token,input[20];
6      printf("Enter input string \t :");
7      scanf("%s",input);
8      //printf("Given string is : %s");
9
10     while((token=input[i++])!='\0')
11     {
12         // printf("current token : %c \n",token);
13         switch(state)
14         {
15             case 0: if(token=='a')
16                     state=1;
17                     else if(token=='b')
18                         state=2;
19                     else
20                     {
21                         printf("Invalid token");
22                         exit(0);
23                     }
24                     break;
25             case 1: if(token=='a')
26                     state=0;
27                     else if(token=='b')
28                         state=3;
29                     else
30                     {
31                         printf("Invalid token");
32                         exit(0);
33                     }
34                     break;
35             case 2: if(token=='a')
36                     state=3;
37                     else if(token=='b')
38                         state=0;
39                     else
40                     {
41                         printf("Invalid token");
42                         exit(0);
43                     }
44                     break;
45             case 3: if(token=='a')
46                     state=2;
47                     else if(token=='b')
48                         state=1;
49                     else
50                     {
51                         printf("Invalid token");
52                         exit(0);
53                     }
54                     break;
55         }
56         // printf("state = %d ",state);
57     }
58     if(state==0)
59         printf("\n\nString accepted\n\n");
60     else
61         printf("\n\nString not accepted\n\n");
62 }
63
64

```