

Question 1.WAP in C for Implementation of DFA that accepts all even integers only in the form of binary strings.

```

1 #include<stdio.h>
2 #include<string.h>
3 int validation(char s[],int n){
4     for(int i=0;i<n;i++){
5         if(s[i]!='0' && s[i]!='1')
6             return 0;}
7     return 1;
8 }
9
10 int main(){
11     char s[10];
12     int i=0;
13     char state='0';
14     printf("Enter the string:");
15     scanf("%s",&s);
16     int n=strlen(s);
17     if(validation(s,n)==0){
18         printf("Not Valid");
19         return 0;
20     }
21     while(s[i]!='\0'){
22         switch(s[i]){
23
24             case '0':state='1';i++;
25                 break;
26             case '1': state='0';i++;
27                 break;
28             default:
29                 printf("NOT Valid");
30         }
31     }
32     if(state=='1'){
33         printf("Accepted");
34         return 0;
35     }else{
36         printf("Not Accepted");
37         return 0;
38     }
39     return 0;
40 }
41
42
43
44
45

```

```

D:\Coding Set Ups\Programs\Flat Codes>gcc even.c
D:\Coding Set Ups\Programs\Flat Codes>a
Enter the string:10
Accepted
D:\Coding Set Ups\Programs\Flat Codes>a
Enter the string:100
Accepted
D:\Coding Set Ups\Programs\Flat Codes>a
Enter the string:11
Not Accepted
D:\Coding Set Ups\Programs\Flat Codes>a
Enter the string:123
Not Valid
D:\Coding Set Ups\Programs\Flat Codes>

```

Question 2.WAP in C for Implementation of DFA that accepts all odd integers only in the form of binary strings.

```
1 #include<stdio.h>
2 #include<string.h>
3 int validation(char s[],int n){
4     for(int i=0;i<n;i++){
5         if(s[i]!='0' && s[i]!='1')
6             return 0;}
7     return 1;
8 }
9 int main(){
10     char s[10];
11     int i=0;
12     char state='0';
13     printf("Enter the string:");
14     scanf("%s",&s);
15     int n=strlen(s);
16     if(validation(s,n)==0){
17         printf("Not Valid");
18         return 0;
19     }
20
21     while(s[i]!='\0'){
22         switch(s[i]){
23
24             case '0':state='0';i++;
25                 break;
26             case '1': state='1';i++;
27                 break;
28             default:
29                 printf("NOT Valid");
30         }
31     }
32     printf("DFA PROGRAMMe");
33     if(state=='1'){
34         printf("Accepted");
35         return 0;
36     }else{
37         printf("Not Accepted");
38         return 0;
39     }
40     return 0;
41 }
42
43
```

```
D:\Coding Set Ups\Programs\Flat Codes>a
Enter the string:11
DFA PROGRAMMeAccepted
D:\Coding Set Ups\Programs\Flat Codes>a
Enter the string:100
DFA PROGRAMMeNot Accepted
D:\Coding Set Ups\Programs\Flat Codes>a
Enter the string:123
Not Valid
D:\Coding Set Ups\Programs\Flat Codes>
```

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