

Implementation of Language recognizer for set of all strings over input alphabet  $\Sigma=\{a,b\}$  containing an even number of a's and even number of b's.

```
#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;
            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");
}
```