```prolog
final(s3).
tran(s1,_,s1).
tran(s1,'a',s2).
tran(s2,'b',s3).
epsilon(s2,s4).
tran(s3,'b',s4).
epsilon(s3,s1).

accepts(State,[]):-
                final(State),
            write('String accepted').
accepts(State,[X|Rest]):-
                tran(State,X,State1),
                accepts(State1,Rest).
accepts(State,[X|Rest]):-
                epsilon(State,State1),
                accepts(State1,[X|Rest]).
main(A):-
                accepts(s1,A).
```

Output

```
GNU Prolog 1.4.4 (64 bits)
Compiled Jul 26 2013, 04:49:52 with gcc
By Daniel Diaz
Copyright (C) 1999-2013 Daniel Diaz
| ?- consult('nfa.pl').
compiling /home/tapan/progrmming/prolog/nfa.pl for byte code...
/home/tapan/progrmming/prolog/nfa.pl:6: warning: discontiguous predicate tran/3 - clause ignored
/home/tapan/progrmming/prolog/nfa.pl:7: warning: discontiguous predicate epsilon/2 - clause
ignored
/home/tapan/progrmming/prolog/nfa.pl compiled, 20 lines read - 1780 bytes written, 12 ms

yes
| ?- main([a,b,a,b]).
String accepted

true ?

yes
| ?- main([a,b,a]).

no
| ?-
```