

```
automata = ( '2APA' | 'APA' | 'NBA' | '2NFA' | 'NFA' | '2DFA' |
            'DFA' | 'MOORE' )
```

```
automata '{'
  'ALPHABET' '=' list( alphElem )
  'STATES'  '=' list( state )
  'START'  '=' start
  ['DELTA' '(' letter [sign] ',' alphElem ')' '=' next]*
}'
```

```
alphElem: ''' sign '''
```

```
sign: (letter | number)+
```

```
NBA|2NFA|NFA|2DFA|DFA => state: letter [sign] [ ':' 'ACCEPTING' ]
```

```
2APA|APA => state: letter [sign] ':' ('0'|'1'|'2'|'3')
```

```
MOORE => state: letter [sign] ':' ('true'|'false'|'?')
```

```
2APA|APA => start: posbool( sign )
```

```
NBA|2NFA|NFA => start: list( sign )
```

```
2DFA|DFA|MOORE => start: sign
```

```
2APA => next: posbool( dirState )
```

```
2NFA => next: ('[' ']' | list( dirState ))
```

```
2DFA => next: dirState
```

```
APA|NBA|NFA|DFA|MOORE => next: start
```

```
dirState: letter [sign] ':' dir
```

```
dir: ('FORWARD'| 'PAUSE' | 'BACK')
```

```
letter: ('a'|'b'|'c'|...|'y'|'z')
```

```
number: ('0'|'1'|'2'|...|'8'|'9')
```

The arrow (\Rightarrow) means, that the right side is only active if automata is one of the elements from the left side. Furthermore, **list** with the parameter x is defined as

```
list(x) = '[' x [',' x]* ']'
```

and **posbool** with the parameter x is defined as

```
posbool(x) = ('TRUE' | 'FALSE' | x | posbool(x) '&&' posbool(x) |
             posbool(x) '||' posbool(x))
```