

$[ORDINARY]$
 $CHARS ::= EOF \mid Other \langle\langle ORDINARY \rangle\rangle$
 $STATES ::= OPEN \mid CLOSED$

File

$content : seq\ CHARS$
 $state : STATES$

$last\ content = EOF$
 $\#(content \upharpoonright \{EOF\}) = 1$

FileInit

File'

$content' = \langle \rangle$
 $state' = CLOSED$

Overwrite

$\Delta File$
 $in? : seq\ CHARS$

$content' = in?$

Append

$\Delta File$
 $in? : ORDINARY$

$content' = content \frown \langle in? \rangle$

Open

$\exists File$

Close

$\exists File$

Read

$\exists File$
 $out! : CHARS$