Analysis of Software Artifacts

Alcoa (Lecture 11)
Grapical notation corresponds to text

alloy

alocoa: a tool for analyzing specifications written in

alocoa: the object modeling language

Alocoa
{ parent : Dir \rightarrow Dir

contents: Directory \rightarrow Object

name: Directory \rightarrow Name

entries: Dir \rightarrow Directory

cur: Dir

root: fixed Dir

partition File, Dir, Object

state

File system (continued)
{ det parent

    || o | o.parent = o contents.entries

} det parent

File system (continued)
```java
no d | in d. parent

all d: Dir - Root | one d. parent

no Root. parent

all d: all el, et: d. entries | el. name = et. name

all d | all el, et: d. entries | et. name = el. name

```
all f: File | some d | f in d.entries.contents

all d | d != Root -> Root in d.+parent
assert NoDirtIases

File system continued