Princeton University
COS 217: Introduction to Programming Systems
UNIX Orphan and Zombie Processes

Normal

Parent waits for child
Child exits

Child exits

Parent exits

1 OK

Zombie

Orphan

Parent waits for child

Parent exits

Process 1 adopts child

2 OK

Orphan
Zombie

Normal

Process 1 adopts child

Child exits

Child never exits

Zombie

Zombie

5 Possible Trouble
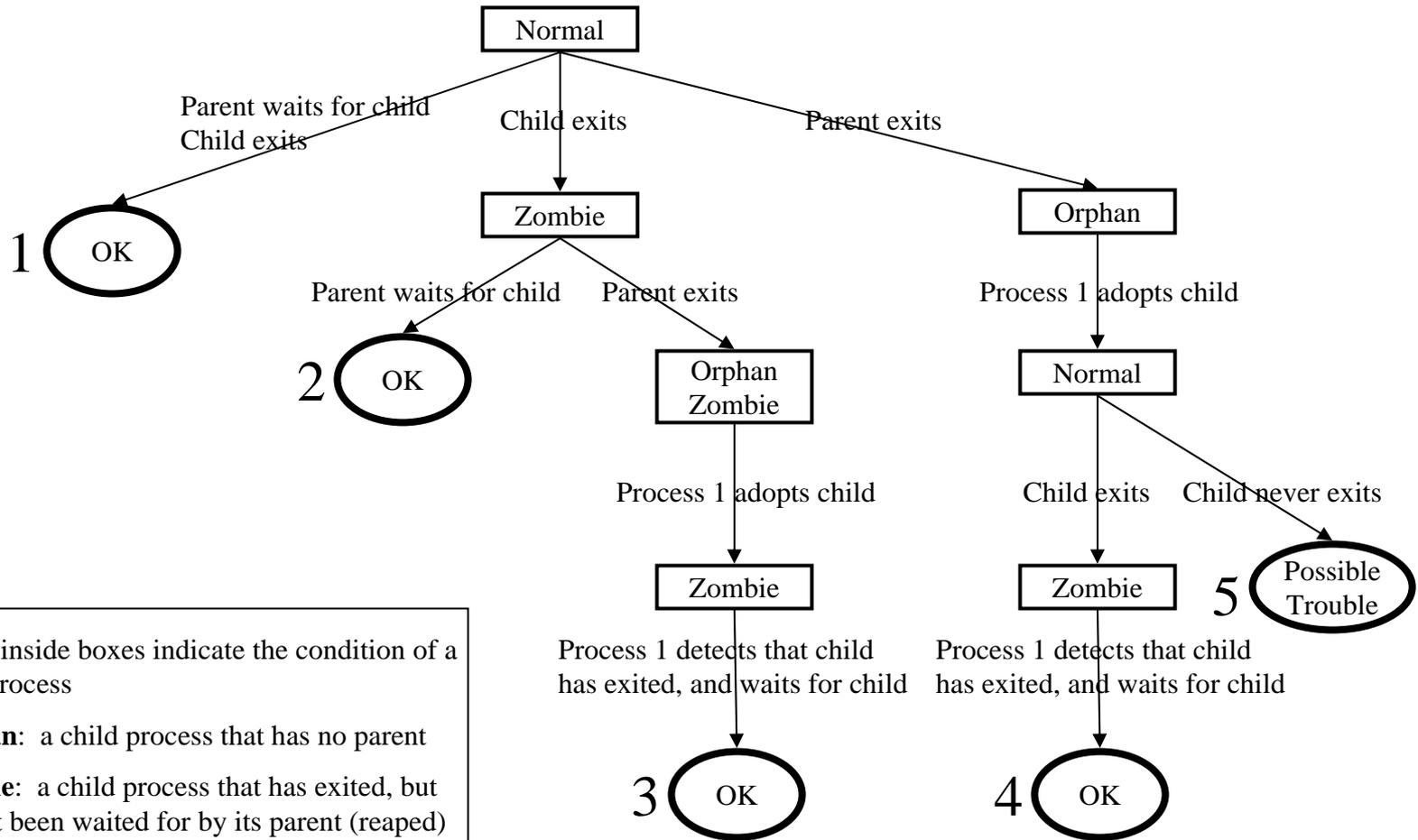
Terms inside boxes indicate the condition of a child process

Orphan: a child process that has no parent

Zombie: a child process that has exited, but has not been waited for by its parent (reaped)

Process 1 detects that child has exited, and waits for child

Process 1 detects that child has exited, and waits for child

3 OK

4 OK