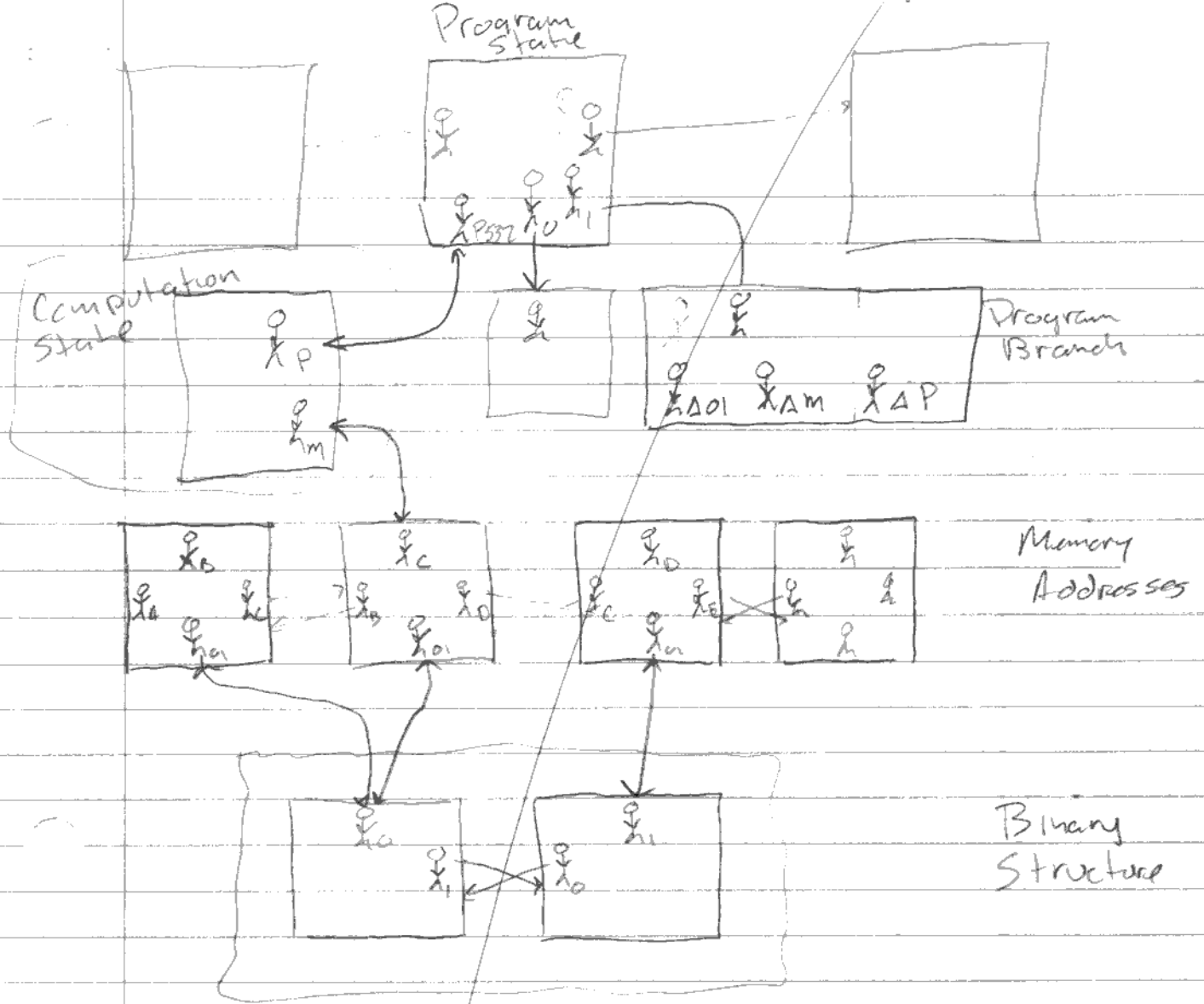# Turing Machine Variations

Memory transitions from linear
to hierarchical or other structures

References into multiple memories
or multiple points in same
memory rather than just 1

Memory locations contain more
complicated structures than 0 $\leftrightarrows$ 1
Consequently more than 2 transitions
out of single program node

Program State

Computation State

Program Branch

$\Delta 01$ Δm ΔP

Memory Addresses

Binary Structure

Generalized turing machine

mem Memory Stall   mem address   Prog address

0   1   L   A

1   1   L   B

B

A

B

C

A

L

R

C

456

O

1

C

C

C