

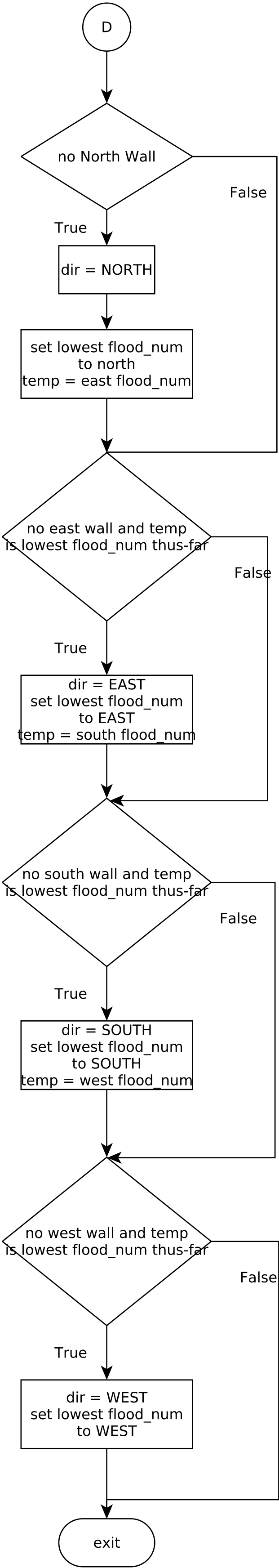
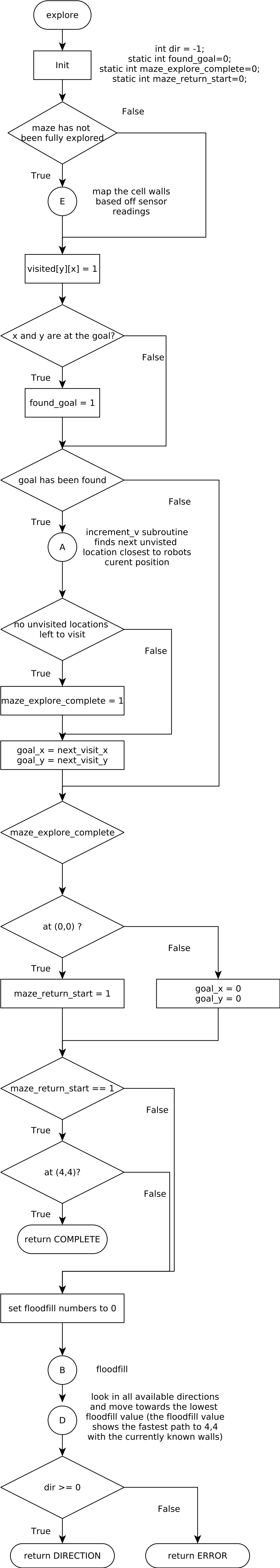
explore:

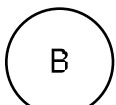
The explore algorithm started as simply the explore logic.
Through programming the assignment, it eventually became
the function which determines the next move for the entirety
of the maze.

Based off some flags (which hopefully are fairly self descriptive), explore
implements different methods to provide the bot with the next move at
each cell (including drive back to home and race).

Basic algorithm:

If the maze is not fully explored, run a goal seeking floodfill algo to provide the next direction
If the maze has been explored and it's not at (0,0), drive to (0,0)
If the bot is back at (0,0), follow the path created by floodfill (shortest path in our case)
If the bot is at (4,4), return 4.





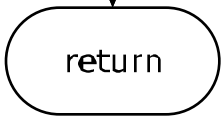
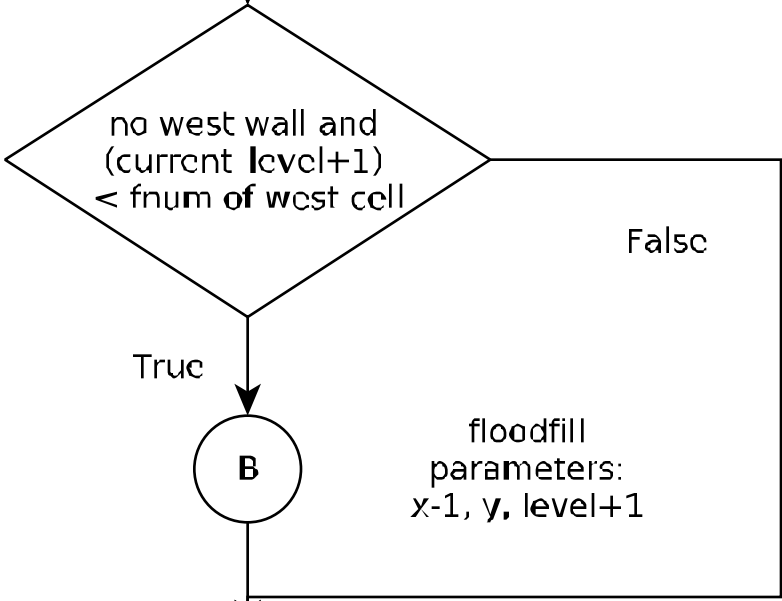
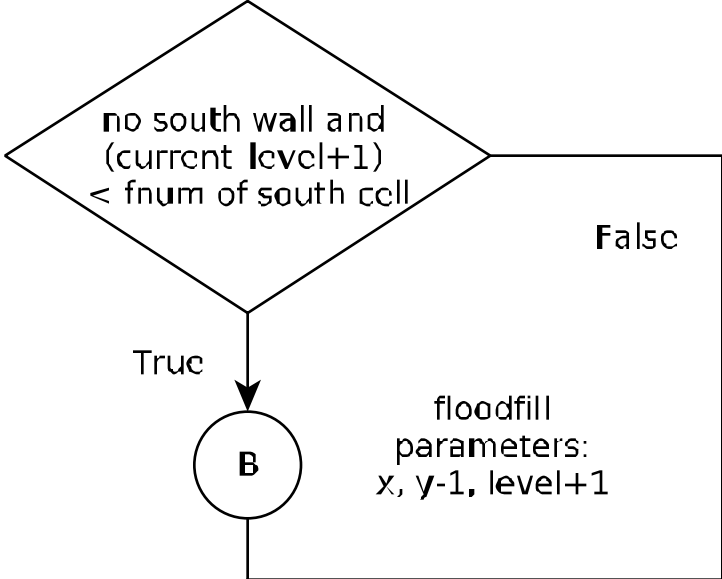
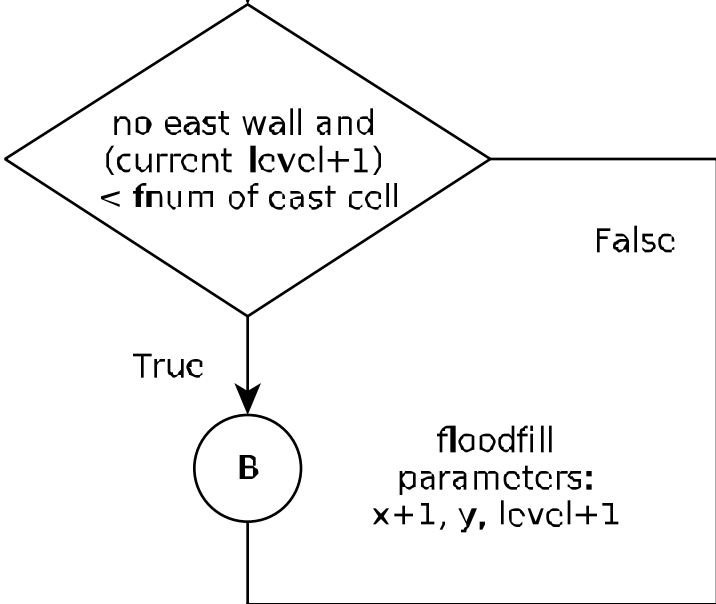
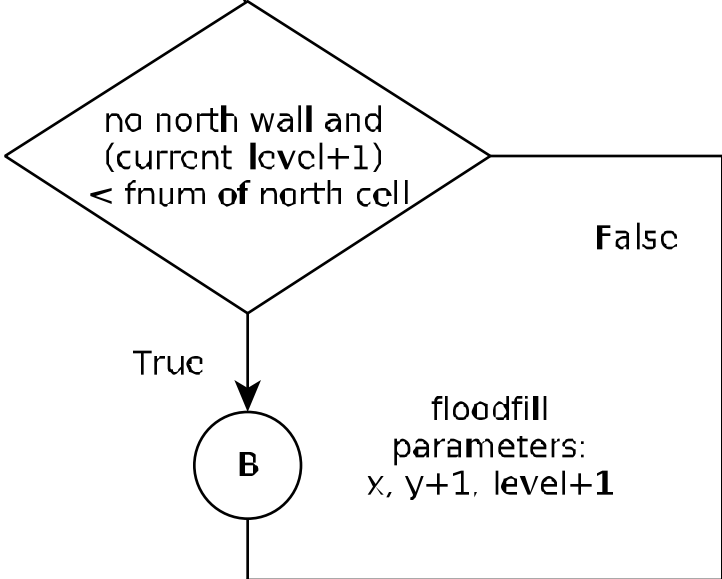
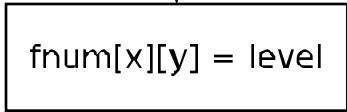
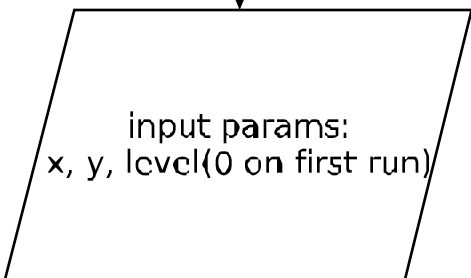
floodfill

floodfill is a recursive algorithm

Takes parameters x,y, and level

Sets fnum array to level (indicates distance away from start)

Checks north, east, south, and west cells and runs floodfill (with level + 1) if the cell has a floodfill value > (level+1) and no walls between it



increment_v subroutine
finds next unvisited
location closest to robots
current position

