A subclass definition specifies new state & methods, and inherits everything else.

Must always specify constructors (can't inherit them!)

This minimal subclass only specifies constructors; inherits everything else.
Here we see the inherited state and methods...

...as well as the new constructors.
The new subclass has additional state and methods.
We usually don't show the inherited state & methods, just the new ones.
Private: only accessible within this class.

Public: accessible to code in any class.

Protected: accessible to code in this or any subclass.

GridObject

- GridObject()
- GridObject(Grid grid, Location loc)
- boolean isInAGrid()
- Grid grid()
- Location location()
- void act()
- void addToGrid(Grid grid, Location loc)
- void changeLocation(Location newLoc)
- void removeFromGrid()

MinSubclass

- MinSubclass()
- MinSubclass(Grid grid, Location loc)
Inherits all state & methods from superclass, but can only directly use public and protected state & methods.

Can access private inherited state only through methods in the superclass.

Private: only accessible within this class.

Public: accessible to code in any class.

Protected: accessible to code in this or any subclass.
GridObject

- Grid theGrid
- Location myLoc

GridObject()
GridObject(Grid grid, Location loc)

boolean isInAGrid()

Grid grid()
Location location()

void act()

void addToGrid(Grid grid, Location loc)
void changeLocation(Location newLoc)
void removeFromGrid()

ColorBlock

- Color theColor

ColorBlock(Color colorVal)
ColorBlock(Color colorVal, Grid grid, Location loc)
Color color()

TextCell

- String theText
- Color theColor

TextCell(String text, Color cVal)
TextCell(String text, Color colorVal, Grid grid, Location loc)
String text()
Color color()
Grid

abstract int numRows()
abstract int numCols()
GridObject[][] allObjects()
boolean isValid(Location loc)
GridObject objectAt(Location loc)
void add(GridObject obj, Location loc)
void remove(GridObject obj)
void remove(Location loc)

BoundedGrid

int numRows
int numCols
GridObject[][] theGrid:

BoundedGrid(int rows, int cols)
int numRows()
int numCols()

UnboundedGrid

ArrayList<GridObject>
objList:

UnboundedGrid()
int numRows()
int numCols()
GridObject

Grid theGrid
Location myLoc

GridObject()
GridObject(Grid grid, Location loc)
boolean isInAGrid()
Grid grid()
Location location()
void act()
void addToGrid(Grid grid, Location loc)
void changeLocation(Location newLoc)
void removeFromGrid()

VerticalPercolator

VerticalPercolator()
void act()
location getPercolationLocation()
void percolateTo(Location newLoc)

protected

protected