Exercises

Lab00

A Robot object’s default initial conditions are to start at (1, 1) facing east with zero beepers. If you don’t want the default settings, you may specify the x-coordinate, y-coordinate, direction, and number of beepers. For instance:

Robot ophelia = new Robot(); **//calls the *default constructor***

Robot horatio = new Robot(5, 4, Display.SOUTH, 37); **//calls the *4-arg constructor***

**1) What does ophelia know? What does horatio know? What do both robots know?**

Ophelia starts at (1,1) facing east with no beepers.

Horatio starts at (5,4), facing south with 37 beepers.

**2) Write the command to create a robot named pete starting at (4, 3) facing west with 50 beepers.**

Robot pete = new Robot (4, 3, Display.West, 50);

**3) Complete the main method to have lisa move one block, put down a beeper, then move another block. Since we have not set-up a specific map, the *default robot-map* will be used. The default map is empty except for the two infinite-length walls on the southern and western edges.**

**public static void** main (String[] args)

{

Robot lisa = **new** Robot(7, 7, Display.SOUTH, 15);

lisa.move();

lisa.putBeeper();

lisa.move();

}

**4) Complete the main method to have martha move forward five blocks and “hand-off” her beeper to George. Have George move forward two blocks and put the beeper down.**

**public static void** main (String args[])

{

Robot martha = **new** Robot(1, 1, Display.NORTH, 1);

Robot george = **new** Robot(1, 6, Display.EAST, 0);

martha.move();

martha.move();

martha.move();

martha.move();

martha.move();

martha.putBeeper();

george.pickBeeper():

george.move();

george.move();

george.putBeeper();

}

5) Question #3 has no Display.openWorld. In that case, what map is used?

**The default robot map will be used. "The default map is empty except for the two infinite length walls on the southern and western edges."**