程序说明
version 0.0.1

修订历史

日期	版本	作者	描述
2015/8/21	0.0.1	Zhushuhuang	Create project

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程序功能

Jumper is an class which extends from Bug. It implements the following function:

1.public Jumper();

Jumper constructor.

2.public Jumper(Color jumperColor);

Jumper constructor with Color parameter.

3.public void move();

Move the Jumper forward two cells and leave nothing to the original cell.

4.public boolean canMove();

Return true if the second cell in front of the Jumper is valid and do not occupied by the other actor, else return false.

实现过程

After we analysed the the need of program, we decide to choose that the Jumper is a subclass of Bug because they have the same property and action. We think that they should have the relation of “is-a” relation. So we choose to implement the Jumper by extending the Bug class and reconstructing the move and canMove methods.

For implementing canMove method, we should check the first cell in front of the Jumper is valid since we need to call the getAdjacentLocation method to get the second cell in front of the jumper. If the first cell is not valid in grid(here we call the isValid method of Grid to check that), then the second cell is not valid in grid too. After checking that the first cell is valid in grid, we should check the second cell is true and the second cell is empty for the jumper to move to.

For implementing move method, we only need to check that the second cell in front of the Jumper is valid in grid. If the second cell in front of the Jumper is valid, then call moveTo method to set the Jumper location.

总结体会

Since we implement the code on the basis of the Bug class, we think that it is easy to achieve.