Set1

1.Q: Does the bug always move to a new location? Explain.
> A: No. The bug will stop and change direction when there is a rock ahead.
But it will move to a new position otherwise.

2.Q: In which direction does the bug move?
> A: The bug will move in the direction that it faces to.

3.What does the bug do if it does not move?
> A: Change direction when the bug doesn't move.

4. Q: What does a bug leave behind when it moves?
> A: Flowers will be left behind when the bug moves.

5. Q: What happens when the bug is at an edge of the grid? (Consider whether the bug is facing the edge as well as whether the bug is facing some other direction when answering this question.)
> A: When the bug is facing the edge, it will change direction until there is a grid to move to. But when not facing the edge, it will move forward as usual.

6. Q: What happens when a bug has a rock in the location immediately in front of it?
> A: Change direction clockwise until there is a way to move.

7. Q: Does a flower move?
> A: The flower doesn't move.

8. Q: What behavior does a flower have?
> A: The color of flowers will get darker slowly.

9. Q: Does a rock move or have any other behavior?
> A: The rock has no behaviors and can't move.

10. Q: Can more than one actor (bug, flower, rock) be in the same location in the grid at the same time?
> A: No. If we move one object to another's position. The object below will be replaced. And if we move the object away, we will find nothing on that position. So we conclude that no more than one object can be placed in the same position at the same time.

Exercises

1. Test the setDirection method with the following inputs and complete the table, giving the compass direction each input represents.

Degrees	Compass Direction
0	North
45	Northeast
90	East
135	Southeast
180	South
225	Southwest
270	West
315	Northwest
360	North

2. Move a bug to a different location using the moveTo method. In which directions can you move it? How far

can you move it? What happens if you try to move the bug outside the grid?

Any direction,

Until the edge of grid, if there is no edge, I can move the bug as far as possible.

Exception Happened. Can not move the bug outside the grid.

3. Change the color of a bug, a flower, and a rock. Which method did you use?

Void SetColor(java.awt.Color);

4. Move a rock on top of a bug and then move the rock again. What happened to the bug?

The bug is gone~ ….