

Name: \_\_\_\_\_ BB id: \_\_\_\_\_

Workshop Leader: \_\_\_\_\_

## CSC171 — Quiz 8

### Instructions:

- Write your name and BlackBoard id CLEARLY at the top of this page.
- Copy and sign the declaration of academic honesty on this page.
- You have ten (10) minutes for this quiz once it starts.
- Keep your eyes on your own paper.
- **DO NOT TURN OVER THIS QUIZ UNTIL INSTRUCTED TO DO SO.**

### Declaration of Academic Honesty:

I affirm that I will not give or receive any unauthorized help on this exam, and that all work will be my own.

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Signed: \_\_\_\_\_ Date: \_\_\_\_\_

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```

public class RobotAnimation extends JComponent
    implements ActionListener {

    protected Timer timer;
    protected int x = 100;
    protected int y = 100;
    protected int segment = 1;

    public RobotAnimation() {
        super();
        setPreferredSize(new Dimension(200, 200));
        timer = new Timer(100, this);
        timer.start();
    }

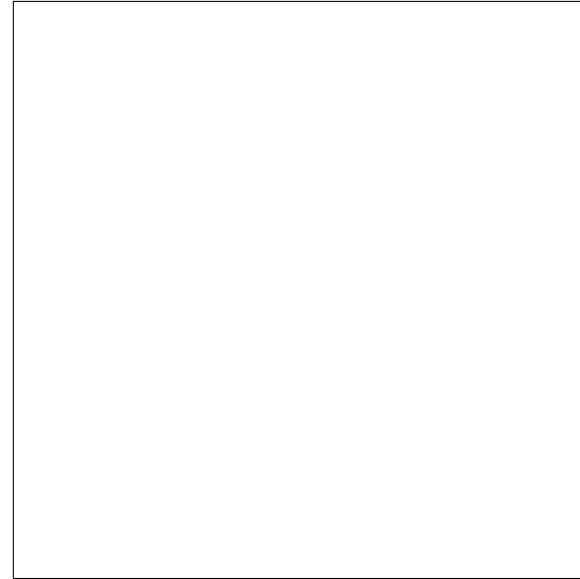
    public void paintComponent(Graphics g) {
        g.fillOval(x-5, y-5, 10, 10);
    }

    public void actionPerformed(ActionEvent e) {
        switch (segment) {
            case 1:
                x += 1; y -= 1;
                if (x >= getWidth()-5) { segment = 2; }
                break;
            case 2:
                y += 1;
                if (y >= getHeight()/2) { segment = 3; }
                break;
            case 3:
                x -= 1;
                if (x <= getWidth()/2) { timer.stop(); }
                break;
            case 4:
                x -= 1; y -= 1;
                if (x > 0) { timer.start(); }
                break;
        }
        repaint();
    }

    // Assume reasonable main method...
}

```

1. The program to the left animates a “robot” around its window. Sketch the path taken by the robot. Use arrows to indicate the direction of the robot.



2. Place an “X” on your drawing to indicate the position of the robot after 15 seconds.

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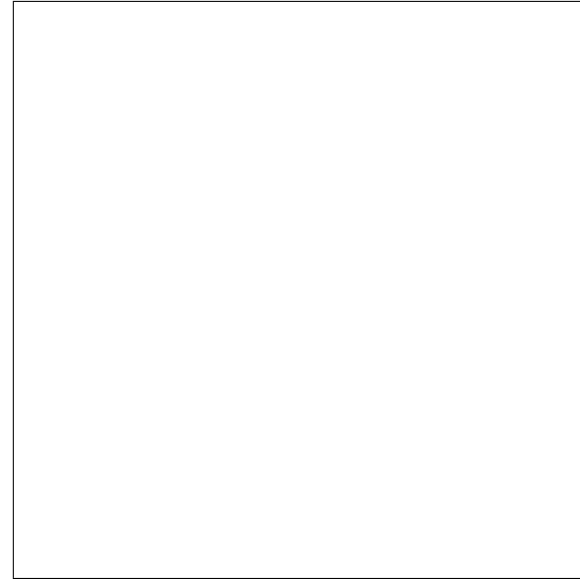
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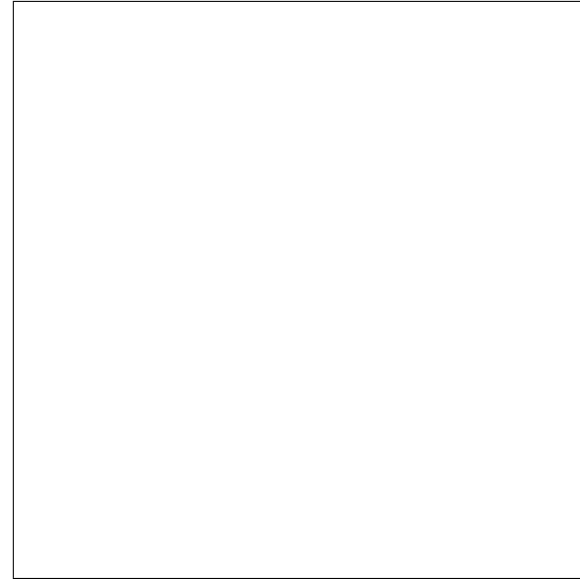
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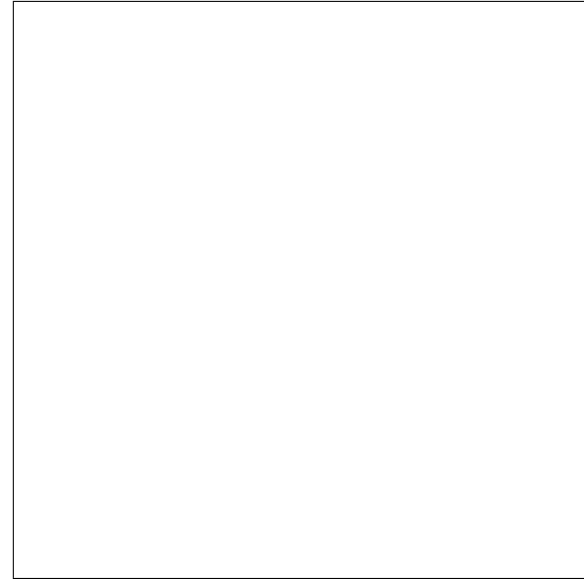
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