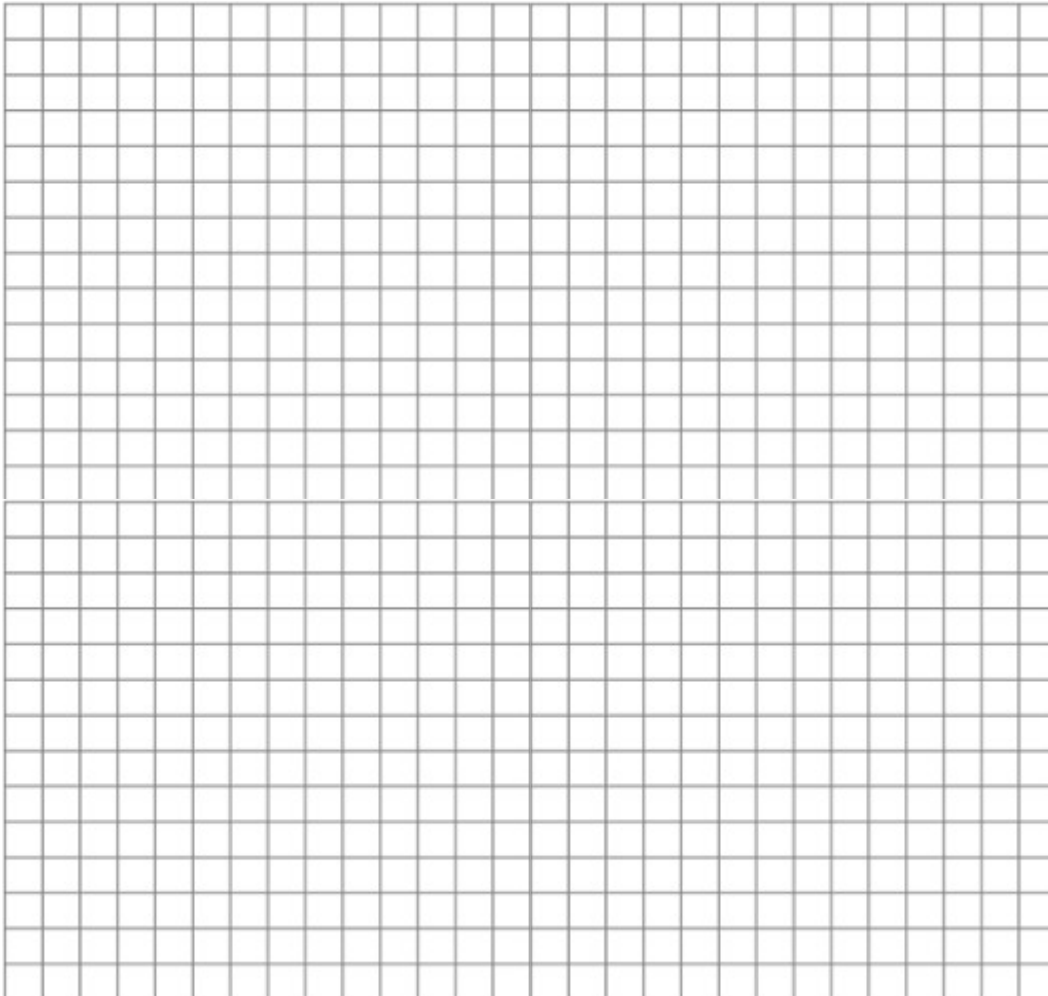


A. Vocabulary: Complete the Answer(s) Column. Avoid ambiguous terms such as “class,” “object,” “component,” and “container.”

| Term(s) | Question(s) | Answer(s) |
|---------------|--|---------------------------|
| repaint() | (a) What does this method <u>call</u> ? | (a) |
| drawArc() | (a) Describe the 3 rd parameter, true of ANY arc (d) Describe the last parameter | (a) (b) |
| fillPolygon() | (a) What is the data type of the first parameter? (b) Describe the 3 rd parameter | (a) (b) |
| '&' | (a) The keyboard does not automatically work, even if you implement and add the KeyListener. To make the panel respond to more than the mouse, what method would need to be called? (b) In what key event handler method would you check to see if this had been entered on the keyboard? (c) What key submethod would be used to see if what was entered was exactly '&'? | (a) (b) (c) |
| mouseMoved | (a) This uses what listener? | (a) |

B. Drawing: On the graph paper provided, draw the final output. Note that each square on the grid is 10 x 10 pixels.

```
public class RideMore extends JPanel
{
    public void paintComponent(Graphics g)
    {
        int [] xArr = {60, 70, 105};
        int [] yArr = {85, 70, 80};
        for(int x = 10; x < 125; x += 95)
            g.drawOval(x, 80, 60, 60);
        g.drawLine(40, 110, 130, 110);
        g.drawLine(75, 120, 95, 90);
        g.drawRect(82, 85, 6, 25);
        g.drawArc(100, 50, 40, 30, 110, -160);
        g.drawString("ride more", 20, 170);
        g.drawPolygon(xArr, yArr, 3);
    }
}
```



Programming

Accessibility involves the design of products for people with disabilities. You are designing a 1000 pixel wide x 800 pixel tall webpage for a healthcare website. A lot of patients will want to change the font size or background color to make the webpage easier to read.

When the up arrow on the keyboard is used, the font size displayed on the screen will become larger by 5 pixels. When the down arrow on the keyboard is used, the font will become smaller by 5 pixels.

The user cannot make the font size larger than 80 pixels or smaller than 8 pixels.

Use the code shown below (which should be familiar from your reading and practice). You are NOT changing other aspects of color, such as hue, contrast, or saturation.

```
Color myRGB = new Color (amountOfRed, amountOfBlue, amountOfGreen); //defines a new Color called myRGB

setBackground (myRGB); //selects the Color myRGB to be used next with foreground painting such as shapes &
font
```

When the user clicks the rectangle titled “brighter,” the background color of the panel will become brighter by increasing all three parameters by 3.* When the user clicks the rectangle titled “darker,” the background color of the panel will become darker by decreasing all three parameters by 3.* In this program, use one variable for each of the three parameters (e.g. Color(x, x, x)). (*There are exceptions to this that you should ignore for this program.)

The user cannot make the screen lighter than white (defined as Color(255, 255, 255)) and darker than dark grey (defined as Color(34, 34, 34)).

Complete the code below. You’ll find pseudocode to help you know what is missing. You do not need to add pseudocode or a testing plan. You should be writing code as demonstrated in class.

A. JFrame File: AccessibilityRunner.java

```
// import each class needed
```

Write the JFrame file needed, including the perfect size so you don’t need to resize it.

```
public class Accessibility
{
    private Color backgroundColor;
    private int fontSize;
    private int colorParameterVar;
    public Accessibility()
    {
        colorParameterVar = 100;
        backgroundColor = new Color(colorParameterVar, colorParameterVar, colorParameterVar);
        setBackground(backgroundColor);
        fontSize = 12;
        //add listeners as appropriate
    }

    public void drawRectanglesWithLabels(Graphics g) //This method is complete
    {
        g.setColor(Color.RED);
        g.fillRect(10,10,100,20);
        g.fillRect(115,10,100,20);
        g.setColor(Color.BLACK);
        g.drawString("brighter", 15, 80);
        g.drawString("darker", 115, 80);
    }
    public void medicalPageContent(Graphics g){ } /*Assume this method is complete. */

    public void writeDirections(Graphics g)
    {
        /* You can assume some magic allows the words to wrap so the text is not off of
        the screen. For us, this allows us to see the font size change in the text. */
        g.drawString ("Press mouse on the panel. To increase the font size, press the UP arrow. " +
            "To decrease the font size, press the DOWN arrow." +
            "To make the screen brighter, click the box labelled brighter" +
            "To make the screen darker, click the box labelled darker", 50, 300);
    }

    public void paintComponent(Graphics g)
    {
        // draw background color
        drawRectanglesWithLabels(g)
        g.setColor(Color.BLACK);
        Font font = new Font("Serif", Font.PLAIN, fontSize);
        g.setFont(font);
        medicalPageContent(g);
    }
}
```

```
public void key_____ (KeyEvent evt)           //fill in blank
{
    /*determine if the user used the keyboard appropriately to elicit a graphical response, record or
change information as appropriate, and call the method to make the appropriate graphical response */
```

```

}
public void key_____ (KeyEvent evt){}           //Fill in blank.
public void key_____ (KeyEvent evt){}           //Fill in blank.
```

```
public void mousePressed(MouseEvent evt)
{
    //make it so the keyboard will work!
```

```

}
public void mouseClicked(MouseEvent evt)
{
    /*determine if the user is clicking on one of the appropriate rectangles to elicit a graphical response,
record or change information as appropriate, and call the method to make the appropriate graphical response*/
```

```

}

public void mouseReleased(MouseEvent evt){}           //This method is complete.
public void mouseEntered(MouseEvent evt){}           //This method is complete.
public void mouseExited(MouseEvent evt){}           //This method is complete.
```

```
}
```