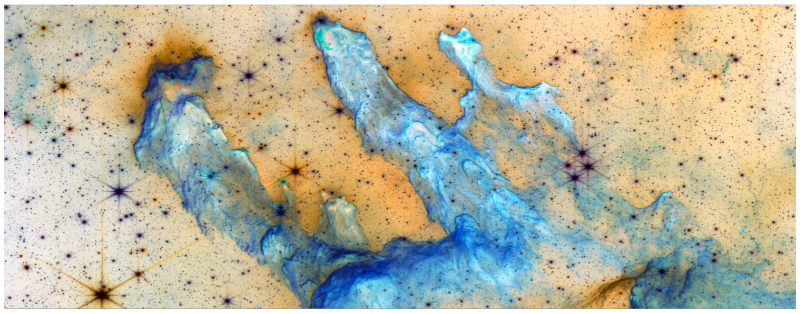
Code:

```
import java.awt.Color;

public class IterationExercisesManipulatingAnImage {

        public static void main(String[] args) {

                Picture pic = new Picture();
                pic.pick();

                int getWidth = pic.getWidth()-1;
                int getHeight = pic.getHeight()-1;

                for (int heightPixel = 0; heightPixel <= getHeight; heightPixel++) {
                        for (int widthPixel = 0; widthPixel <= getWidth; widthPixel++) {
                                Color original = pic.getColorAt(widthPixel, heightPixel);
                                int red = 255 - original.getRed();
                                int green = 255 - original.getGreen();
                                int blue = 255 - original.getBlue();
                                Color negative = new Color(red, green, blue);
                                pic.setColorAt(widthPixel, heightPixel, negative);

                        }
                }

        }

}
```

Original Image:

Manipulated Image:



Picture Class Methods:

```java
import java.awt.Color;
import java.io.File;
import java.net.URL;
import java.awt.image.BufferedImage;
import java.awt.image.ColorModel;
import java.awt.image.Raster;
import java.awt.image.WritableRaster;
import javax.imageio.ImageIO;
import javax.swing.ImageIcon;
import javax.swing.JFileChooser;
import javax.swing.JFrame;
import javax.swing.JLabel;

/**
 * A picture whose pixels can be read and written.
 */
public class Picture {
	private String source;
	private JFrame frame;
	private JLabel label;
	private BufferedImage image;

	/**
	 * Constructs a picture with no image.
	 */
	public Picture() {
		frame = new JFrame();
		frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
		label = new JLabel("(No image)");
		frame.add(label);
		frame.pack();
		frame.setVisible(true);
	}

	/**
	 * Gets the width of this picture.
	 *
	 * @return the width
	 */
	public int getWidth() {
		return image.getWidth();
	}

	/**
	 * Gets the height of this picture.
	 *
	 * @return the height
	 */
	public int getHeight() {
		return image.getHeight();
	}

	/**
 * Loads a picture from a given source.
 *
 * @param source the image source. If the source starts with http://, it is a
 *             URL, otherwise, a filename.
 */
public void load(String source) {
        try {
                this.source = source;
                BufferedImage img;
                if (source.startsWith("http://"))
                        img = ImageIO.read(new URL(source).openStream());
                else
                        img = ImageIO.read(new File(source));
                setImage(img);
        } catch (Exception ex) {
                this.source = null;
                ex.printStackTrace();
        }
}

/**
 * Reloads this picture, undoing any manipulations.
 */
public void reload() {
        load(source);
}

/**
 * Displays a file chooser for picking a picture.
 */
public void pick() {
        JFileChooser chooser = new JFileChooser(".");
        if (chooser.showOpenDialog(null) == JFileChooser.APPROVE_OPTION) {
                load(chooser.getSelectedFile().getAbsolutePath());
        }
}

private void setImage(BufferedImage image) {
        this.image = image;
        label.setIcon(new ImageIcon(image));
        label.setText(" ");
        frame.pack();
}

/**
 * Gets the color of a pixel.
 *
 * @param x the column index (between 0 and getWidth() - 1)
 * @param y the row index (between 0 and getHeight() - 1)
 * @return the color of the pixel at position (x, y)
 */
public Color getColorAt(int x, int y) {
        Raster raster = image.getRaster();
        ColorModel model = image.getColorModel();
        int argb = model.getRGB(raster.getDataElements(x, y, null));
        return new Color(argb, true);
    }

    /**
     * Sets the color of a pixel.
     *
     * @param x the column index (between 0 and getWidth() - 1)
     * @param y the row index (between 0 and getHeight() - 1)
     * @param c the color for the pixel at position (x, y)
     */
    public void setColorAt(int x, int y, Color c) {
        WritableRaster raster = image.getRaster();
        ColorModel model = image.getColorModel();
        Object colorData = model.getDataElements(c.getRGB(), null);
        raster.setDataElements(x, y, colorData);
        label.repaint();
    }
}
```