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# **Week 04 - Tutorial**

## **COMP 102**

**Victoria University of Wellington**

# Questions

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- GoSoapBox
  - Access code: comp102vuw
  - Discussions: Extra Help Session
- Zoom comment
  - Zoom: comp102 Password: comp102

# Password

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- Let's look at last week's example.

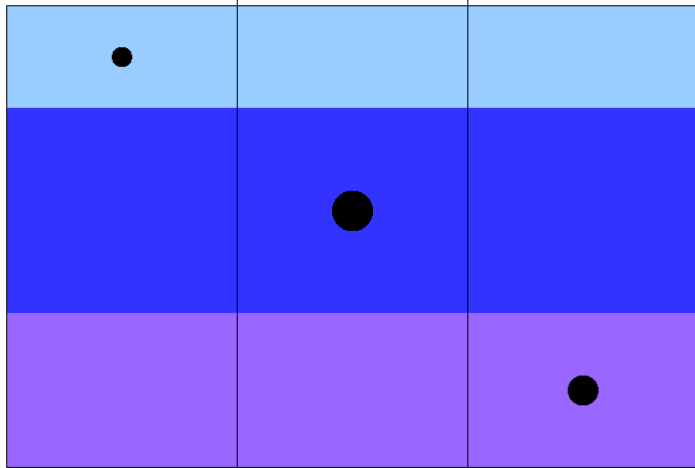
# Flag

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# Let's draw stuff!

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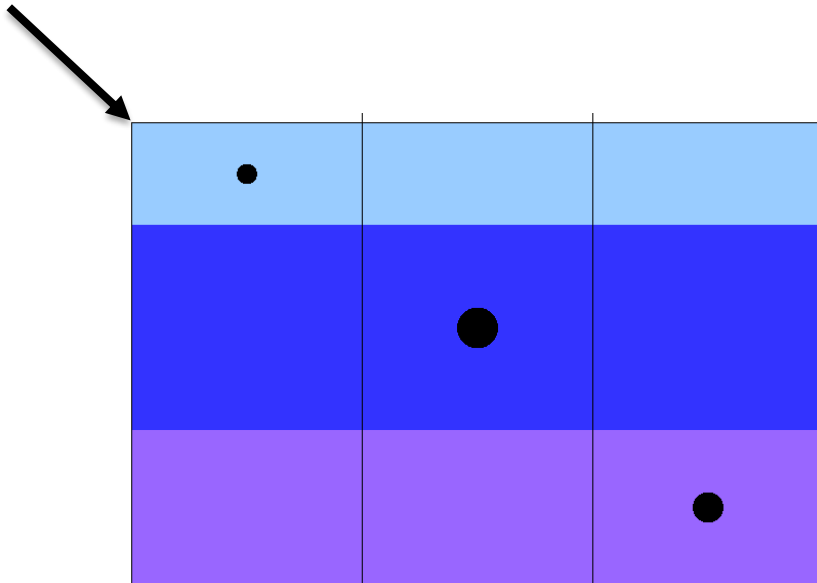
(0,0)



# Let's draw stuff!

(0,0)

```
public void doFancyRect(){  
    double left = UI.askDouble("Left of rectangle");  
    double top = UI.askDouble("Top of rectangle");  
    UI.println("Now choose the colours");  
    Color col1 = JColorChooser.showDialog(null, "First Stripe", Color.white);  
    Color col2 = JColorChooser.showDialog(null, "Second Stripe", Color.white);  
    Color col3 = JColorChooser.showDialog(null, "Third Stripe", Color.white);  
    UI.println("Now choose the sizes");  
    /*# YOUR CODE HERE */  
}
```



This code already gets:

- top/left
- Colors

```
/*# YOUR CODE HERE */
```

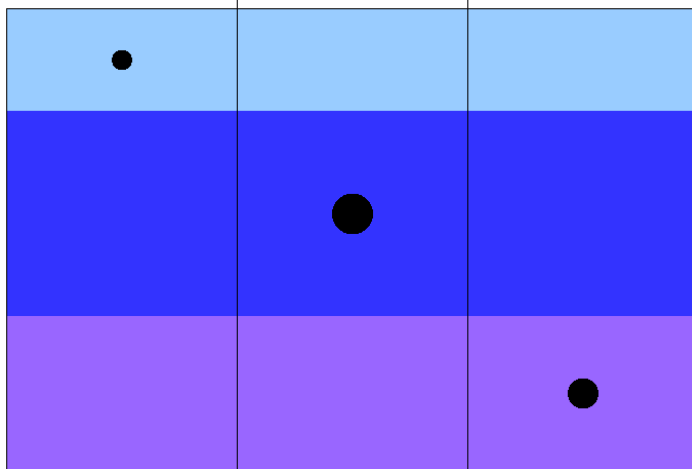
We need to get (from the user)

- stripe heights
- if circles are filled or not

All this information is needed in  
`drawFancyRect(/*# YOUR CODE HERE */)`

# Let's draw stuff!

(0,0)



```
/**
 * Calculates the total height and width of the rectangle.
 * The width of the rectangle is 1.5 times the height of the rectangle.
 * It then calls drawStripe three times to draw the three stripes,
 * and outlines the rectangle with a black contour.
 */
public void drawFancyRect(/*# YOUR CODE HERE */ ){
    UI.clearGraphics();
    /*# YOUR CODE HERE */
}

/**
 * Draws a stripe at the given position that has the right circle at the right place.
 */
public void drawStripe(/*# YOUR CODE HERE */ ){
    /*# YOUR CODE HERE */
}
```

drawFancyRect's parameters must include

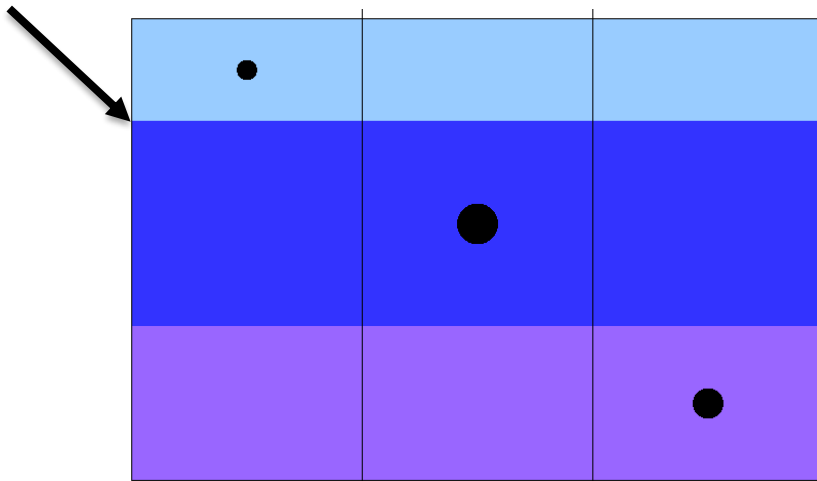
- top/left, Colors, stripe heights, and if circles is are filled or not

drawFancyRect should call drawStrip to draw each fancy strip.

To draw one stripe what do we need to know?

# Let's draw stuff!

(0,0)



```
/**
 * Calculates the total height and width of the rectangle.
 * The width of the rectangle is 1.5 times the height of the rectangle.
 * It then calls drawStripe three times to draw the three stripes,
 * and outlines the rectangle with a black contour.
 */
public void drawFancyRect(/*# YOUR CODE HERE */ ){
    UI.clearGraphics();
    /*# YOUR CODE HERE */
}

/**
 * Draws a stripe at the given position that has the right circle at the right place.
 */
public void drawStripe(/*# YOUR CODE HERE */ ){
    /*# YOUR CODE HERE */
}
```

drawFancyRect's parameters must include

- top/left, Colors, stripe heights, and if circles is are filled or not

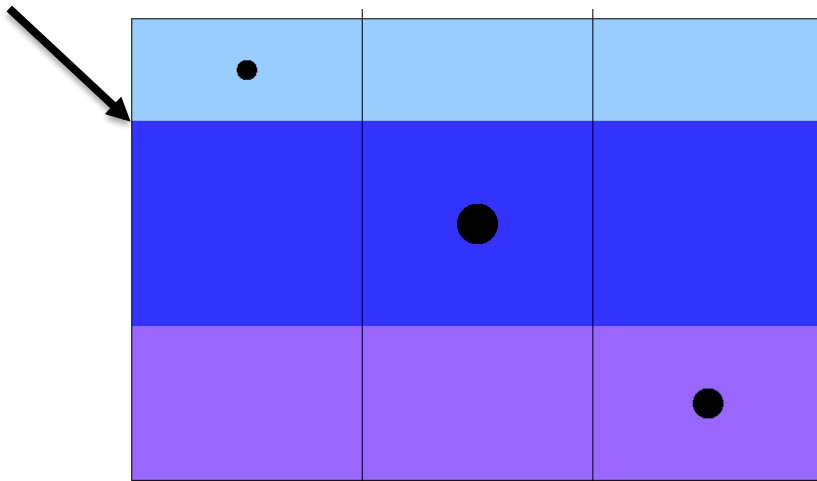
In drawStripe what do we need to know?

Everything needed to draw a stripe



# Let's draw stuff!

(0,0)



```
/**
 * Calculates the total height and width of the rectangle.
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 * It then calls drawStripe three times to draw the three stripes,
 * and outlines the rectangle with a black contour.
 */
public void drawFancyRect(/*# YOUR CODE HERE */ ){
    UI.clearGraphics();
    /*# YOUR CODE HERE */
}

/**
 * Draws a stripe at the given position that has the right circle at the right place.
 */
public void drawStripe(/*# YOUR CODE HERE */ ){
    /*# YOUR CODE HERE */
}
```

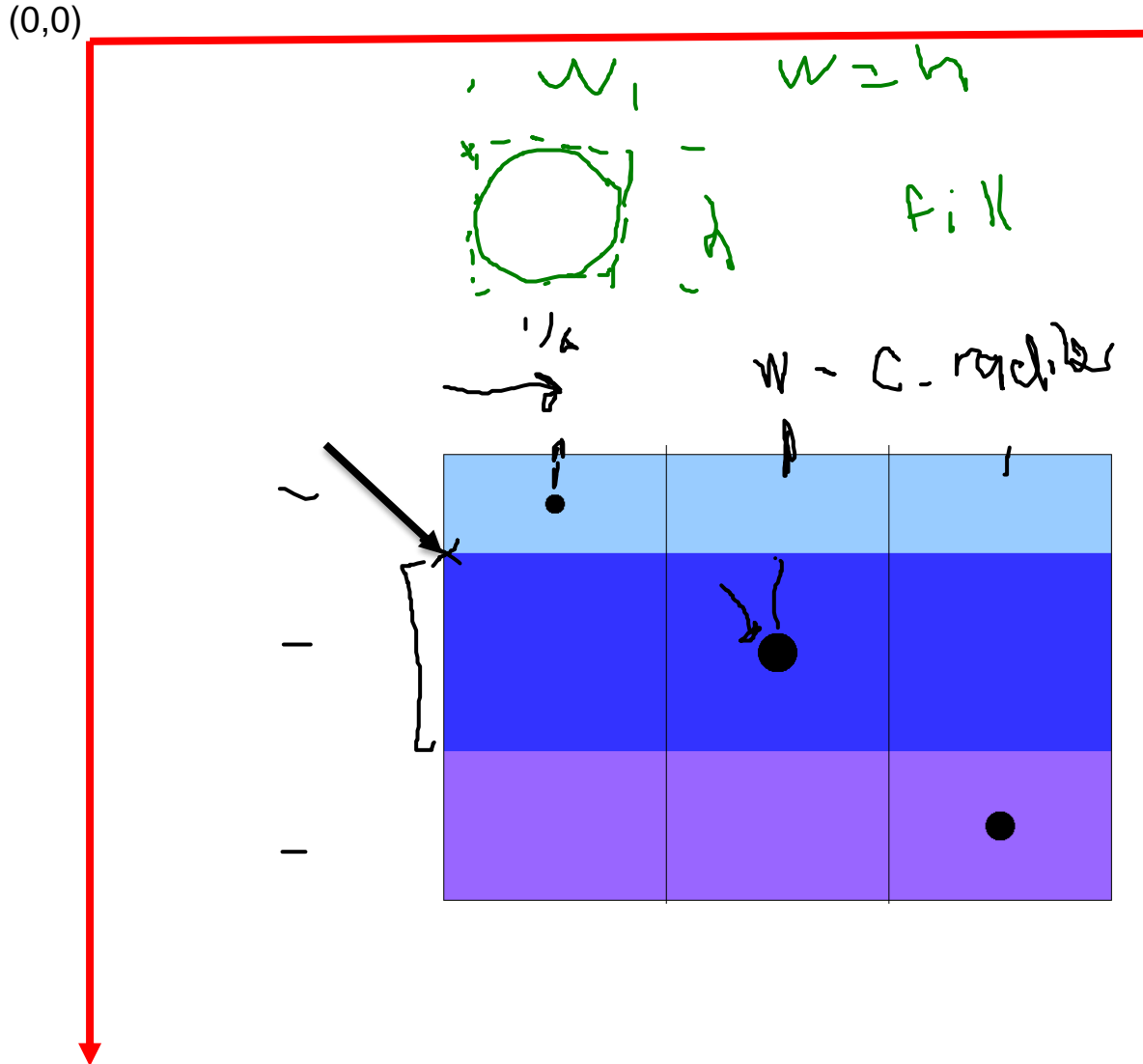
drawFancyRect's parameters must include

- top/left, Colors, stripe heights, and if circles is are filled or not

In drawStripe what do we need to know?

- Top/left of the strip
- Height of the strip
- Color
- Width of the strip (PROBLEM)
- Position of the circle (PROBLEM) and style

# Let's draw stuff!



```

/**
 * Calculates the total height and width of the rectangle.
 * The width of the rectangle is 1.5 times the height of the rectangle.
 * It then calls drawStripe three times to draw the three stripes,
 * and outlines the rectangle with a black contour.
 */
public void drawFancyRect(/*# YOUR CODE HERE */ ){
    UI.clearGraphics();
    /*# YOUR CODE HERE */
}

/**
 * Draws a stripe at the given position that has the right circle at the right place.
 */
public void drawStripe(/*# YOUR CODE HERE */ ){
    /*# YOUR CODE HERE */
}

```

drawFancyRect's parameters must include

- top/left, Colors, stripe heights, and if circles is are filled or not

drawFancyRect must calculate

- Width of the stripe
- Give position information of circle (which 1/3 should it be in)

In drawStripe what do we need to know?

- Top/left of the stripe
  - Height of the stripe
  - Color
  - Width of the stripe
  - Position of the circle and style
- Calculate circle information (top/left/diameter)