CSE8A Today

• Pictures

• Arrays: from 2D to 1D, unraveling your arrays

• Debugging tips and tricks
A. Decreases the blue component of a picture

B. Sets the green component of each pixel to be the same as the blue component

C. Sets the blue component of each pixel to be the same as the green component

D. Loops over all pixels in pixelArray. For each pixelObj calls getGreen and stores that into value. Then sets value into blue.

E. None of the above.
Pixel[] pixelArray = this.getPixels();
int value = 0;
Pixel pixelObj = //first pixel in picture
value = pixelObj.getGreen();
pixelObj.setBlue(value);
pixelObj = //next pixel in picture
value = pixelObj.getGreen();
pixelObj.setBlue(value);
pixelObj = //next pixel in picture
value = pixelObj.getGreen();
pixelObj.setBlue(value);
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pixelObj = //next pixel in picture
value = pixelObj.getGreen();
pixelObj.setBlue(value);
ON AND ON THROUGH ALL PIXELS IN PICTURE
Pixel[] pixelArray = this.getPixels();
int value = 0;
for (Pixel pixelObj: pixelArray)
{
    value = pixelObj.getGreen();
    pixelObj.setBlue(value);
}
• Consider the following code:

```java
int value = 0;
Pixel[] pixArray = this.getPixels();
int index = 0;
Pixel p1 = pixArray[0];
value = p1.getRed();
```

What are the types of: `pixArray`, `p1`, `value`?

A. Pixel, Pixel, int  
B. Pixel array, Pixel, int  
C. Pixel array, Pixel, double  
D. Pixel, double, int

(Which of these store references?)
Memory Model Practice

• Draw the memory model for the following code

```java
int value = 0;
Pixel[] pixArray = this.getPixels();
int index = 0;
Pixel p1 = pixArray[0];
value = p1.getRed();
```

How does it change with:

```java
value = (int) (value * .5);
P1.setRed(value);
```