

CMSC131 Lab

Sections 0108 or 0109

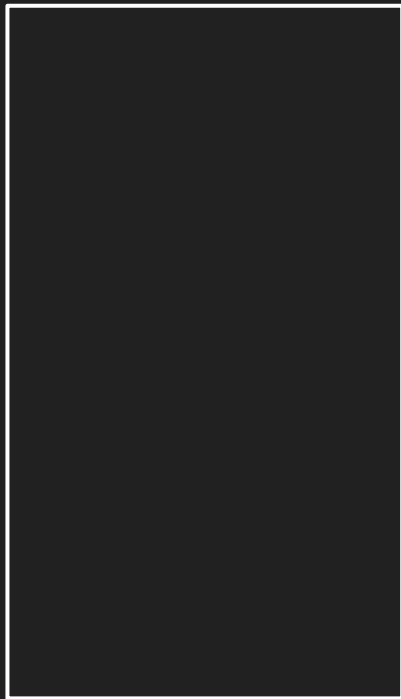
Tim Lin

tlin@cs.umd.edu

OH: Tue. 6-7pm

Memory Maps

Stack



Heap



Static Area

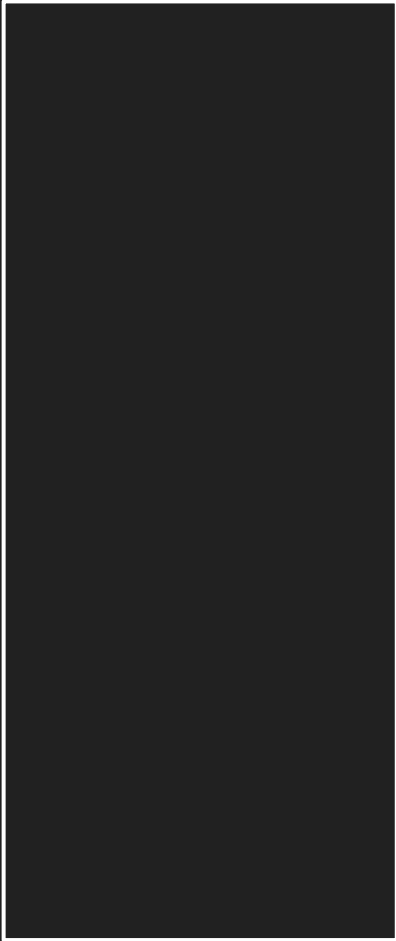


Text Area/Code Area

```
public static void main  
  
public static void add  
  
public void addMinimum  
  
public static int max  
  
public static int min  
  
public int findFirst  
  
private void helper  
  
float getAverageValue  
  
protected int getSize
```

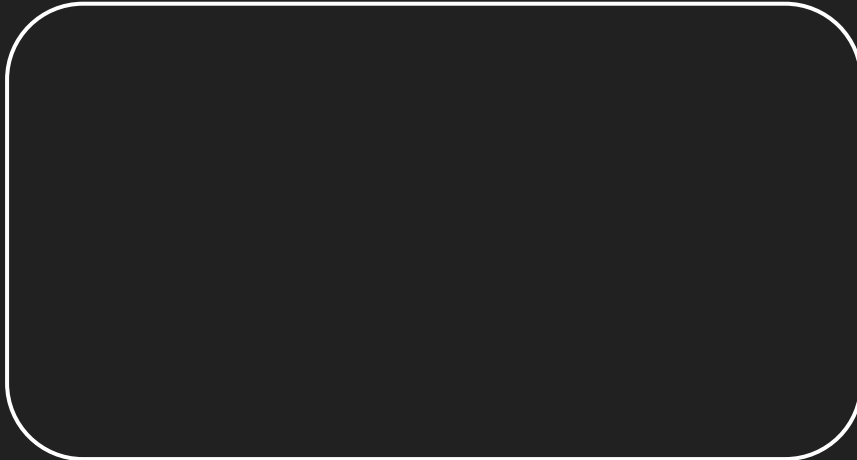
Ex1

Stack

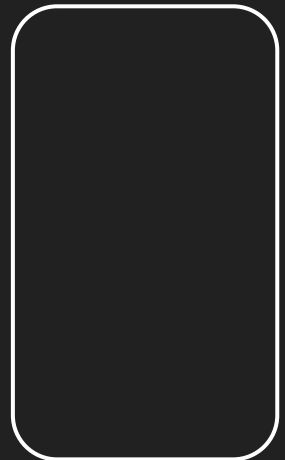


```
public class Driver {  
    public static int sumOfSquares(int x, int y) {  
        int answer = x * x + y * y;  
        /* HERE */  
        return answer;  
    }  
    public static void main(String[] args) {  
        int a = 3, b = 4, result = sumOfSquares(a, b);  
        System.out.println("Answer: " + result);  
    }  
}
```

Heap



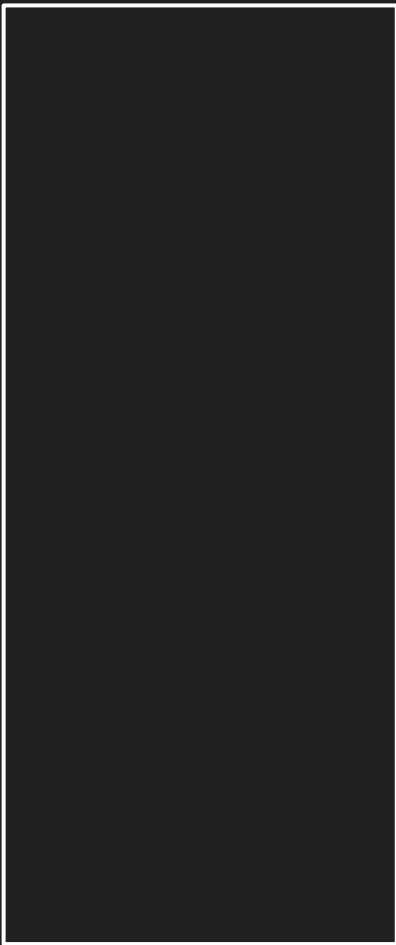
Static Area



COVERED

Ex1

Stack



```
public class Driver {  
    public static int sumOfSquares(int x, int y) {  
        int answer = x * x + y * y;  
        /* HERE */  
        return answer;  
    }  
    public static void main(String[] args) {  
        int a = 3, b = 4, result = sumOfSquares(a, b);  
        System.out.println("Answer: " + result);  
    }  
}
```

Heap



COVERED

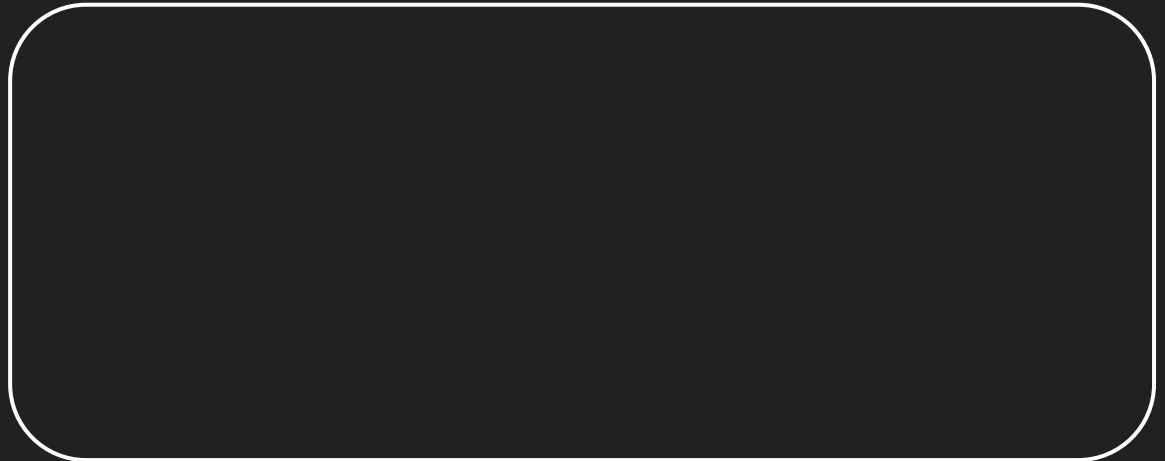
Ex2

Stack



```
public static void wrongUpdate(int x, String y) {  
    x = 100;  
    y = y + "Terps";  
    /* HERE */  
}  
public static void main(String[] args) {  
    int a = -7;  
    String b = "Fall";  
  
    wrongUpdate(a, b);  
}
```

Heap



COVERED

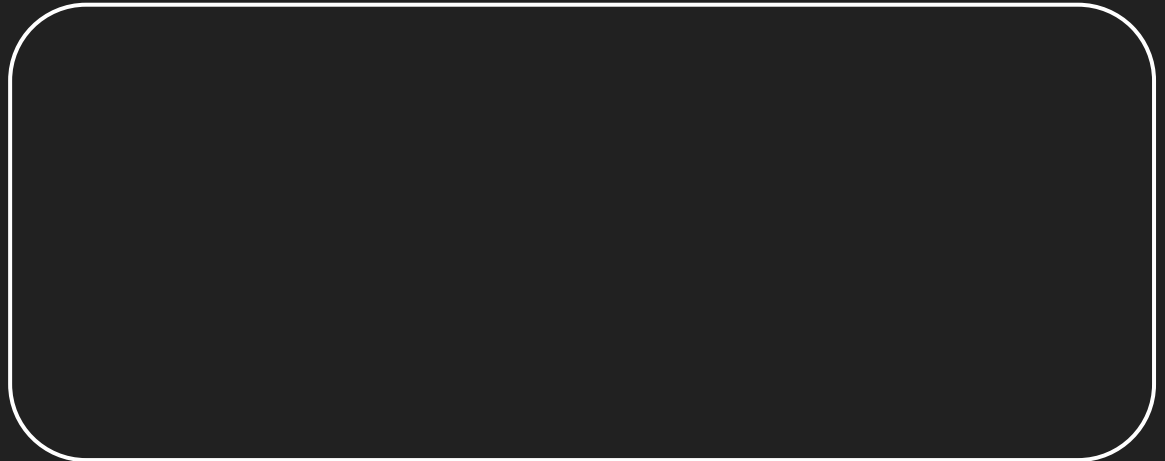
Ex3

Stack



```
public static void wrongUpdate(int x, String y) {  
    x = 100;  
    y = y + "Terps";  
    /* HERE */  
}  
public static void main(String[] args) {  
    int x = -8;  
    String y = "Spring";  
  
    wrongUpdate(x, y);  
}
```

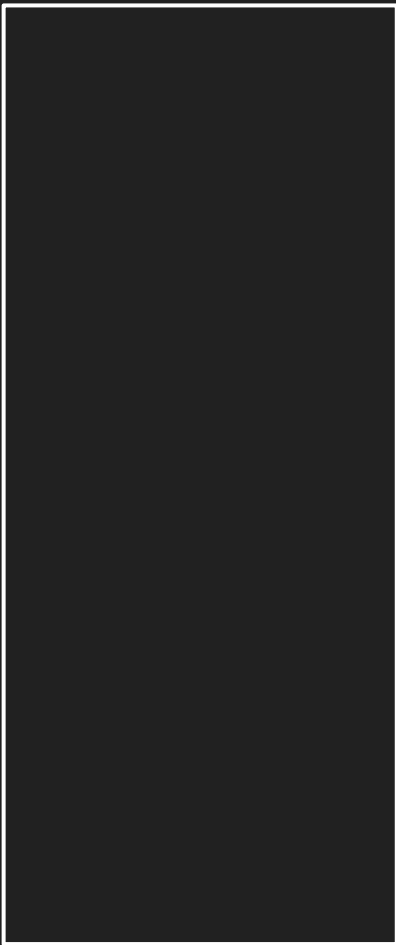
Heap



COVERED

Ex4

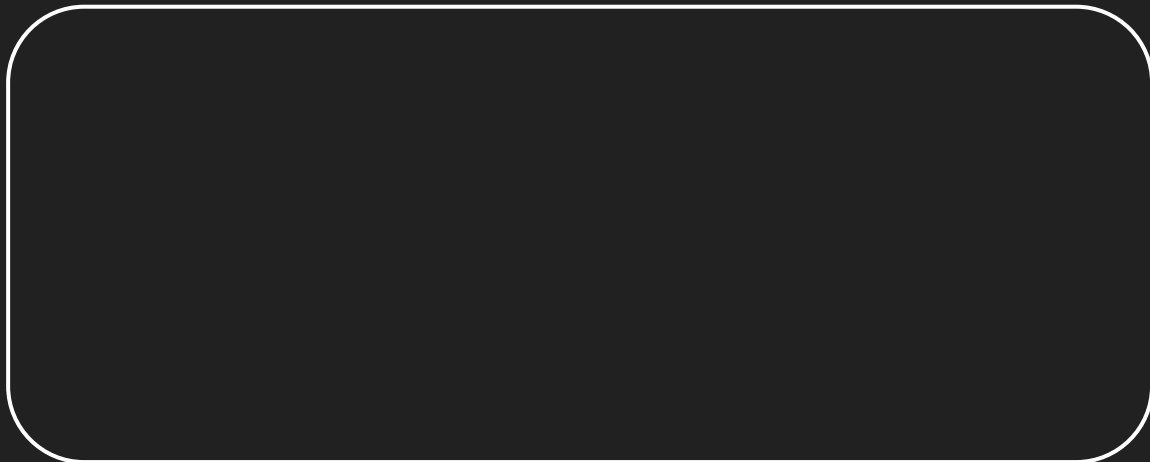
Stack



```
public static void updatingStringBuffer(StringBuffer data){
    data.append("Rainy Day");
    /* HERE */
}

public static void main(String[] args) {
    StringBuffer message = new StringBuffer("Sunny day");
    updatingStringBuffer(message);
}
```

Heap



Message from Nelson

On campus, you must drink pepsi instead of coke. It has nothing to do with memory maps, but we wanted to let you know.

Short Circuiting

Office Hours