

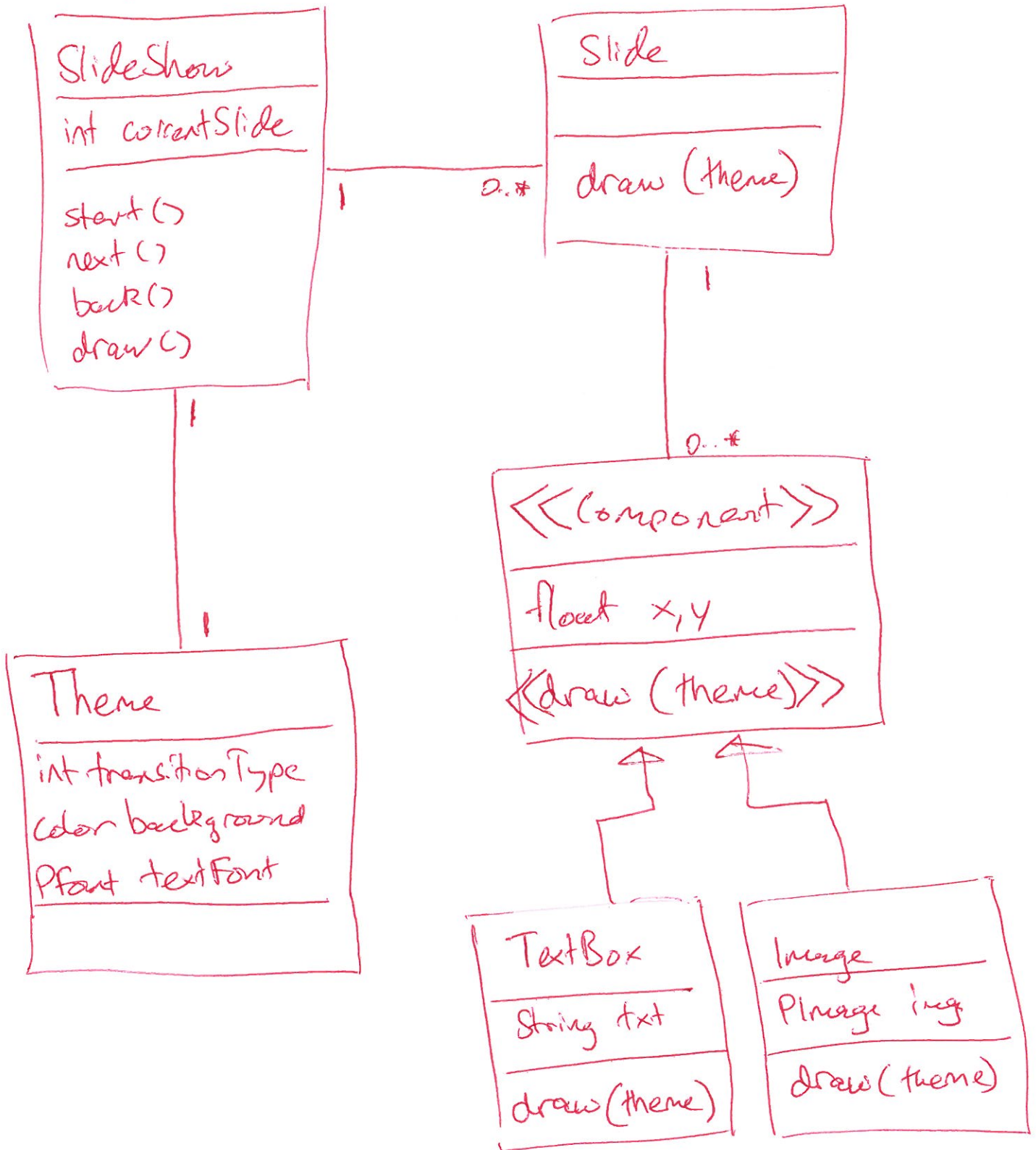
## 09 Final Exam Revision

Q1. Study this class:

```
class Histogram {  
    public char symbol = '*';  
    protected String[] categories;  
    protected int[] frequencies;  
  
    public Histogram(int numCategories) {  
        categories = new String[numCategories];  
        frequencies = new int[numCategories];  
        for (int index=0; index<numCategories; index++) {  
            categories[index] = "unlabeled";  
            frequencies[index] = 0;  
        }  
    }  
  
    public void setCategory(int index, String name, int frequency) {  
        categories[index] = name;  
        frequencies[index] = frequency;  
    }  
  
    public String toString() {  
        String result = "";  
        for (int index=0; index<categories.length; index++) {  
            result+=categories[index]+": ";  
            result+=repeatSymbol(frequencies[index]);  
            result+="\n";  
        }  
        return result;  
    }  
  
    protected String repeatSymbol(int numTimes) {  
        String result = "";  
        for (int index=0; index<numTimes; index++)  
            result += symbol;  
        return result;  
    }  
}
```

(a) Identify (i) the constructor, (ii) the fields and (iii) the methods.

3(a)



4 (a)

