15-121 Fall 2019 Quiz 3

Up to 18 minutes. No calculators, no notes, no books, no computers. Show your work!

1. (12 points) **Free Response:** Write the public, static method `minimum` which, given an array of integers `arr` returns the smallest integer in the array. It should return `Integer.MAX_VALUE` if the array is empty.

2. (3 points) **Short Answer**

   In just a few words, what's the difference between a class and an object?

3. (5 points) **Code Tracing:** Indicate what the following program prints. Place your answer (and nothing else) in the box under the code. Note that the program has *three* print statements.

```java
public class Quiz3CT {
    int[] data;

    public Quiz3CT(int a, int b) {
        data = new int[a - b];
        for (int i = b; i < a; i++) {
            data[i - b] = b + i * 2;
        }
    }

    public int mystery() {
        int val = 0;
        for (int i = 0; i < data.length; i++) {
            if (data[i] % 2 == 0) {
                val = data[i]++;
            }
        }
        return val;
    }

    public String toString() {
        return Arrays.toString(data);
    }

    public static void main(String[] args) {
        Quiz3CT var = new Quiz3CT(6, 2);
        System.out.println(var);
        System.out.println(var.mystery());
        System.out.println(var);
    }
}
```



```
```