Data Structures - Quiz - 11

Question:

For an EdgeList graph (the implementation we covered in class), write a method `public boolean nextTo(V a, V b)` that returns `true` if there are two vertices in the graph, a and b, such that a and b are directly connected by an edge, regardless of the direction of that edge.

Solution:

```java
public boolean nextTo(V a, V b) {
    Vertex<V> vertex = null;
    for (Vertex<V> v : vertices) {
        if (v.getElement().equals(a))
            vertex = v;
    }
    for (Edge<E, V> e : outgoingEdges(vertex)) {
        Vertex<V> temp = opposite(vertex, e);
        if (temp.getElement().equals(b)) {
            return true;
        }
    }
    for (Edge<E, V> e : incomingEdges(vertex)) {
        Vertex<V> temp = opposite(vertex, e);
        if (temp.getElement().equals(b)) {
            return true;
        }
    }
    return false;
}
```