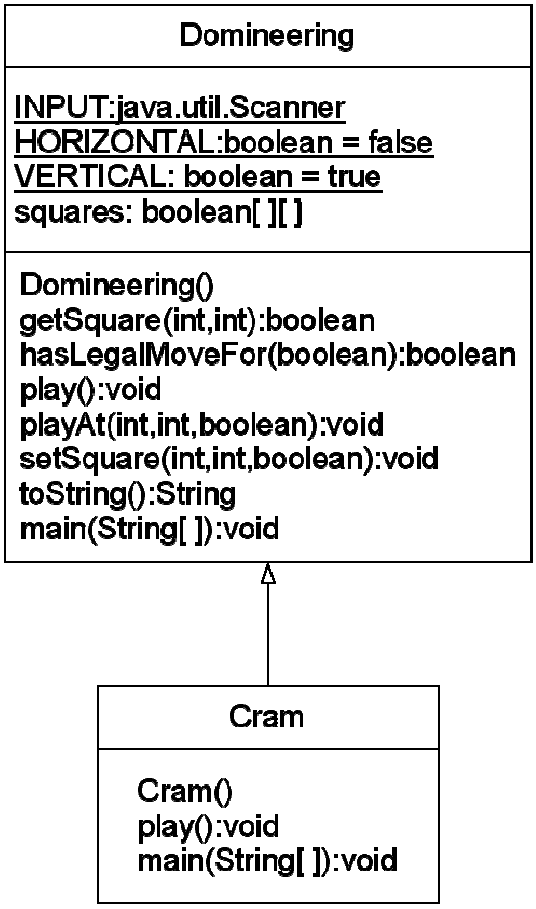
Chapter 3 Exercises Solutions

3.1



3.2 No, this can be determined at compile time.

3.3 Any class that implements the child interface would also need to implement and parent interfaces as well. Because there are no implementations in interfaces, the notion of polymorphism does not apply. The child interface cannot override a parents methods. When an interface extends another interface, it extends the requirements of the parent.

3.4

bicycle is-a vehicle
bicycle has-a tire

triangle is-a polygon
rutabaga is-a vegetable
person has-a bank account
general is-a soldier

3.5 If an is-a relationship is symmetric than it is equivalent to an equality relationship meaning the objects being related are identical. Symmetric has-a relationships are quite common e.g a husband has-a wife and a wife has-a husband.

3.6 It calls the Object class's toString() method which prints out the a square bracket [fore each dimension and a short type description followed by its address. Something similar to the following is expected:

[I@10b62c9
[lLight@12ab55f
[[I@10b62c9

3.7

```
public class Thingamabob extends Object {

  private int x;

  public Thingamabob() {
    super();
  }

 public void setX(int x) {
    this.x = x;
  }
}
```

3.8 Because Whatsis does not define a constructor, it implicitly established that its default constructor will simply call the super() constructor. The problem is the default Doohickey constructor (one without any arguments) is not defined.

3.9 It is not acceptable for a method to have a more restrictive access level than the one it overrides. Any attempts to do so will result in a compilation error similar to: *attempting to assign weaker access privileges*. It is, however, acceptable to assign less restrictive access privileges.

3.10

Command line option	***Displayed methods and variables.***
{empty}	protected, public
-public	public
-private	private, protected, public, default (package private)
-protected	protected, public