

Exercise 14 Answers

Interfaces

1.

```
2. interface IsEmergency {  
    public void soundSiren();  
}
```

3. class PoliceCar implements IsEmergency, IsLandVehicle {

```
    // Properties...  
    private String name;  
    private int    maxPassengers;  
    private int    maxSpeed;  
    private int    numWheels;  
  
    // Constructor...  
    public PoliceCar(String aName) {  
        name          = aName;  
        maxPassengers = 4;  
        maxSpeed      = 220;  
        numWheels     = 4;  
    }  
  
    // IsVehicle methods...  
    public String getName() {  
        return name;  
    }  
    public void setName(String aName) {  
        name = aName;  
    }  
    public int getMaxPassengers() {  
        return maxPassengers;  
    }  
    public void setMaxPassengers(int aMaxPassengers) {  
        maxPassengers = aMaxPassengers;  
    }  
    public int getMaxSpeed() {  
        return maxSpeed;  
    }  
    public void setMaxSpeed(int aMaxSpeed) {  
        maxSpeed = aMaxSpeed;  
    }  
  
    // IsLandVehicle methods...  
    public int getNumWheels() {
```

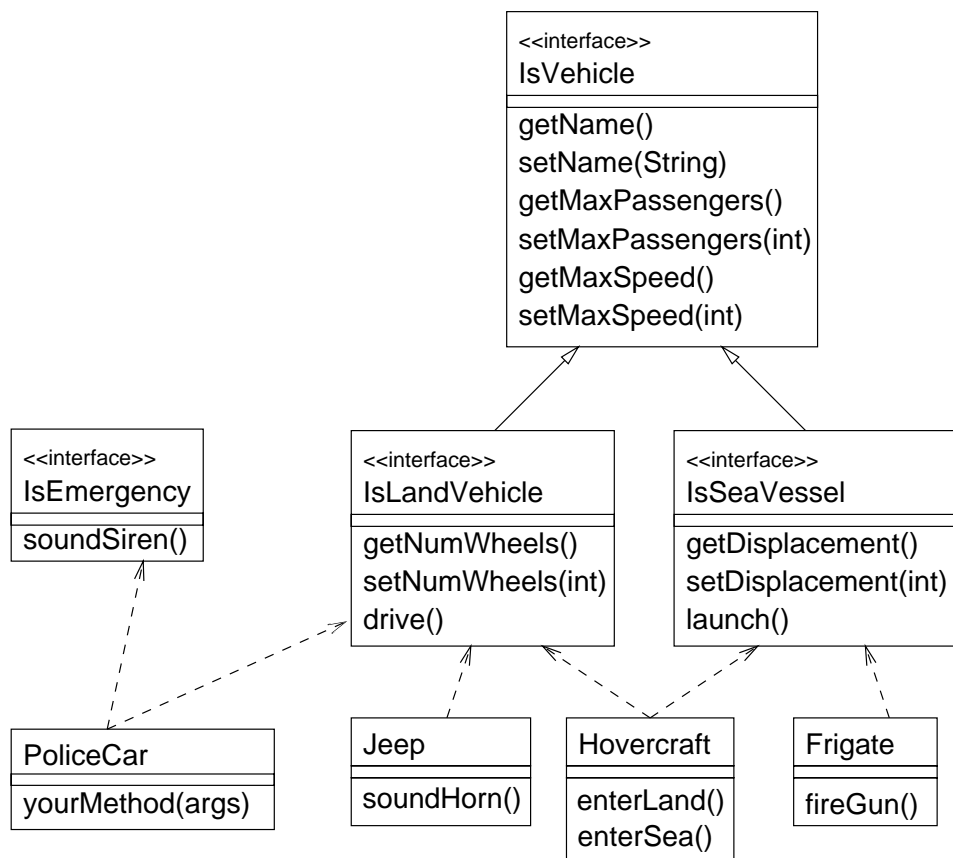
```

        return numWheels;
    }
    public void setNumWheels(int aNumWheels) {
        numWheels = aNumWheels;
    }
    public void drive() {
        System.out.println("Police car driving!");
    }
}
}

```

4.

5. Here is the UML diagram:



6. Increase the size of the myArray array to 5 and add the following line to the main method.

```

myArray[4] = new PoliceCar("Boss Hog's car");

```

7. Add the following code to the body of the for loop:

```

if (myArray[i] instanceof IsEmergency) {
    IsEmergency ev = (IsEmergency)myArray[i];
    ev.soundSiren();
}

```