

## Group exercises # 1

- 1) Consider an object called space shuttle. Among the following, select what would describe the state of the object, and what would be a behavior of the object.
  - a. The speed of the shuttle when reentering the Earth atmosphere.
  - b. The maximum payload that the shuttle can carry.
  - c. The act of docking the shuttle to the international space station.
  - d. The act of starting the shuttle engine.

- 2) For each of the objects listed below, give the name of a class that this object could be an instance of. Name the class following the Java style guidelines.

Example: for the object “a cell phone”, a possible class name could be CommunicationDevice. Don’t just restate the name of the object for the name of the class (e.g. CellPhone).

- a. A pair of glasses
  - b. A wallet
  - c. A movie theater
  - d. A Walmart store
  - e. A subtraction such as  $8 - 2 = 6$
  - f. A novel
- 3) Draw the class diagram for the following class:

```
public class Dog {  
    private String name;  
    private int age;  
  
    public Dog(String n, int a) {  
        // code  
    }  
  
    public void bark() {  
        //code  
    }  
  
    public boolean eat(String food) {  
        // code  
    }  
}
```