

## Evidence for Implementation and Testing Unit

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E19

### I.T 1 Demonstrate one example of encapsulation in a program

```
package com.example.janeflucker.todolist;

import java.io.Serializable;

/**
 * Created by janeflucker on 24/03/2018.
 */

public class Task implements Serializable {
    private int id, completed;
    private String taskName, taskDescription;

    public Task(int id, String taskName, String taskDescription, int completed) {
        this.id = id;
        this.taskName = taskName;
        this.taskDescription = taskDescription;
        this.completed = completed;
    }

    public Task(String taskName, String taskDescription) {
        this.taskName = taskName;
        this.taskDescription = taskDescription;
        this.completed = 0;
    }

    public int getId() {
        return this.id;
    }

    public String getTaskName() {
        return this.taskName;
    }

    public String getTaskDescription() {
        return this.taskDescription;
    }

    public int getCompleted() {
        return this.completed;
    }
}
```

## I.T 2 Example the use of inheritance in a program

```
public abstract class Instruments implements IPlay, ISell {  
    private String material;  
    private String colour;  
    private InstrumentType type;  
    private int buyPrice;  
    private int sellPrice;  
  
    public Instruments(String material, String colour, InstrumentType type, int buyPrice, int sellPrice) {  
        this.material = material;  
        this.colour = colour;  
        this.type = type;  
        this.buyPrice = buyPrice;  
        this.sellPrice = sellPrice;  
    }  
  
    public String getMaterial() {  
        return this.material;  
    }  
  
    public String getColour() {  
        return this.colour;  
    }  
  
    public String getType() {  
        return this.type.getType();  
    }  
  
    public int getBuyPrice() {  
        return this.buyPrice;  
    }  
  
    public int getSellPrice() {  
        return this.sellPrice;  
    }  
  
    public int calculateMarkup() {  
        return sellPrice - buyPrice;  
    }  
}
```

```
public class Guitar extends Instruments {  
    int numberStrings;  
  
    public Guitar(String material, String colour, InstrumentType type, int buyPrice, int sellPrice, int numberStrings) {  
        super(material, colour, type, buyPrice, sellPrice);  
        this.numberStrings = numberStrings;  
    }  
  
    public int getNumberStrings() {  
        return this.numberStrings;  
    }  
  
    public String play() {  
        return "Strum strum...";  
    }  
}
```

**I.T 2 Example the use of inheritance in a program cont..**

### **I.T 3 Example of searching**

## **I.T 4 Example of sorting**

**I.T 5 Example of an array, a function that uses an array and the result**

**I.T. 6 Example of a hash, a function that uses a hash and the result**

## **I.T 7 Example of polymorphism in a program**



## **I.T 7 Example of polymorphism in a program cont...**