**Report Lab 03**

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1. **Method overloading**
   1. Overloading by differing types of parameter

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Figure . Overloading by differing types of parameter

* 1. Overloading by differing the number of parameters

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Figure 2. Overloading by differing the number of parameters

1. **Passing parameters**

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Figure : Original source code of TestPassingParameter

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Figure : Results of the given source code

**Questions:**

* After the call of **swap(jungleDVD, cinderellaDVD)** why does the title of these two objects still remain?

**Answer:** When the swap function is called, this function creates mirror references of two objects jungleDVD and cinderellaDVD (o1 and o2). Therefore, the changes to o1 and o2 do not affect the original ones. This means that the title of two objects still remain after calling swap function.

* After the call of **changeTitle(jungleDVD, cinderellaDVD.getTitle())** why is the title of the JungleDVD changed?

**Answer:**

When the function is called, a new reference dvd is created and point to jungleDVD. The change of the title in reference dvd with the method setTitle leads to the change of the object jungleDVD.

After that, we assigned the new object to dvd. However, jungleDVD is not affected since dvd is now pointing to the newly created object.

**Modified source code:**

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Figure : Modified source code for TestPassingParameter

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Figure : The results

1. **Use debug run**
   1. **Setting, deleting, & deactivae breakpoints**

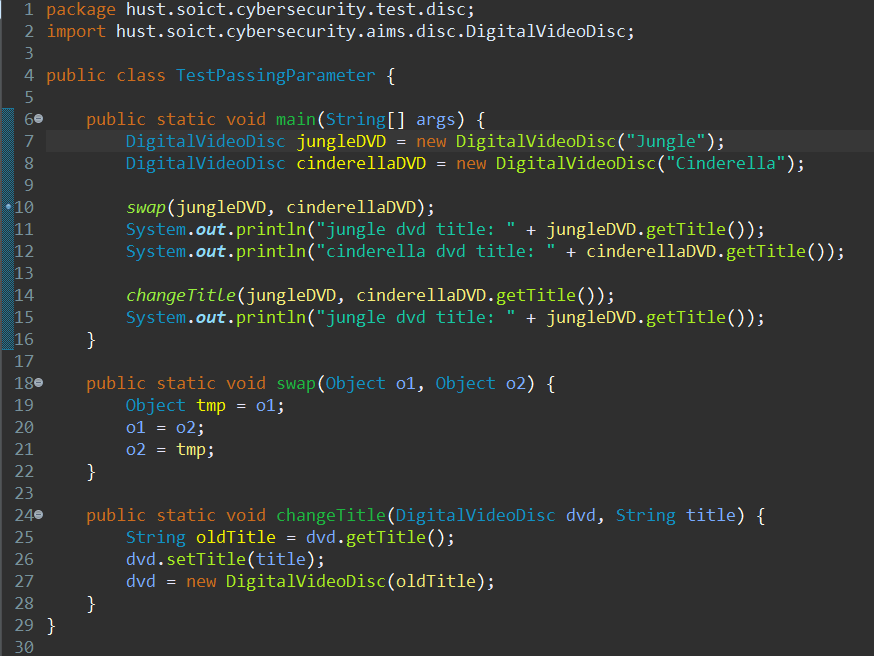
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Figure : The breakpoint is activated

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Figure : The breakpoint is deactivated

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Figure : Breakpoints View

* 1. **Run in debug mode**

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Figure : Debug mode

* 1. **Step Into, Step Over, Step Return, Resume**

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Figure : Step Into

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Figure : Step Over

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Figure : Step Return

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Figure : Resume

* 1. **Investigate value of variables**

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Figure : Variables View

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Figure : Step Over line 19

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Figure : Step Over line 20

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Figure : Step Over line 21

* 1. **Change value of variables**

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Figure : Step Return to the main function

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Figure : Change title of jungleDVD

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Figure : Result

1. **Classifier Member and Instance Member**

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Figure : Create new attributes id and nbDigitalVideoDiscs

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Figure : Updating nbDigitalVideoDiscs and assigning id in each constructor

1. **Cart Class**

Writing method to print items in cart

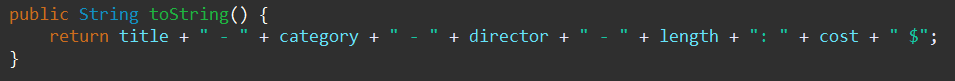
****

Figure : Method toString in class DigitalVideoDisc

A computer screen shot of a program code

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Figure : Method to print items in cart

Writing methods for searching:

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Figure : Method isMatch for title

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Figure : Method searchByID

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Figure : Method searchByTitle

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Figure : Testing search methods in CartTest

1. **Store Class**

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Figure : Class Store

A screen shot of a computer program

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Figure : Class StoreTest

1. **Reorganize projects**

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Figure : Structure for AimsProject

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Figure : Structure for OtherProjects

1. **String, StringBuilder and StringBuffer**

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Figure : Class ConcatenationInLoops

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A computer screen shot of a program code

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Figure : Class GarbageCreator

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A screen shot of a computer program

Description automatically generated

Figure : Class NoGarbage

1. **UseCase Diagram**

**A diagram of a network

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Figure : UseCase Diagram

1. **Class Diagram**

**A diagram of a computer flowchart

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Figure : Class Diagram