**Báo cáo bài thực hành số 4**

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1. New written code:
   1. Create Book class:

A screen shot of a computer program

Description automatically generated

* 1. Creating Media abstract:

A screenshot of a computer program

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A screen shot of a computer program

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* 1. Creating the CompactDisc class
* Create the Disc class:

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* Create the Track class:

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* Create the CompactDisc class:

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* 1. Create the Playable interface:

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* 1. Update the Cart class to work with Media:

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* 1. Update the Store class to work with Media:

A screen shot of a computer program

Description automatically generated

* 1. Polymorphism with toString() method:

:A computer screen shot of a program code

Description automatically generated

* 1. Sort media in the cart:

A computer screen shot of text

Description automatically generated

A black background with white text

Description automatically generated

* 1. Create a complete console application in the Aims class:

A screen shot of a computer program

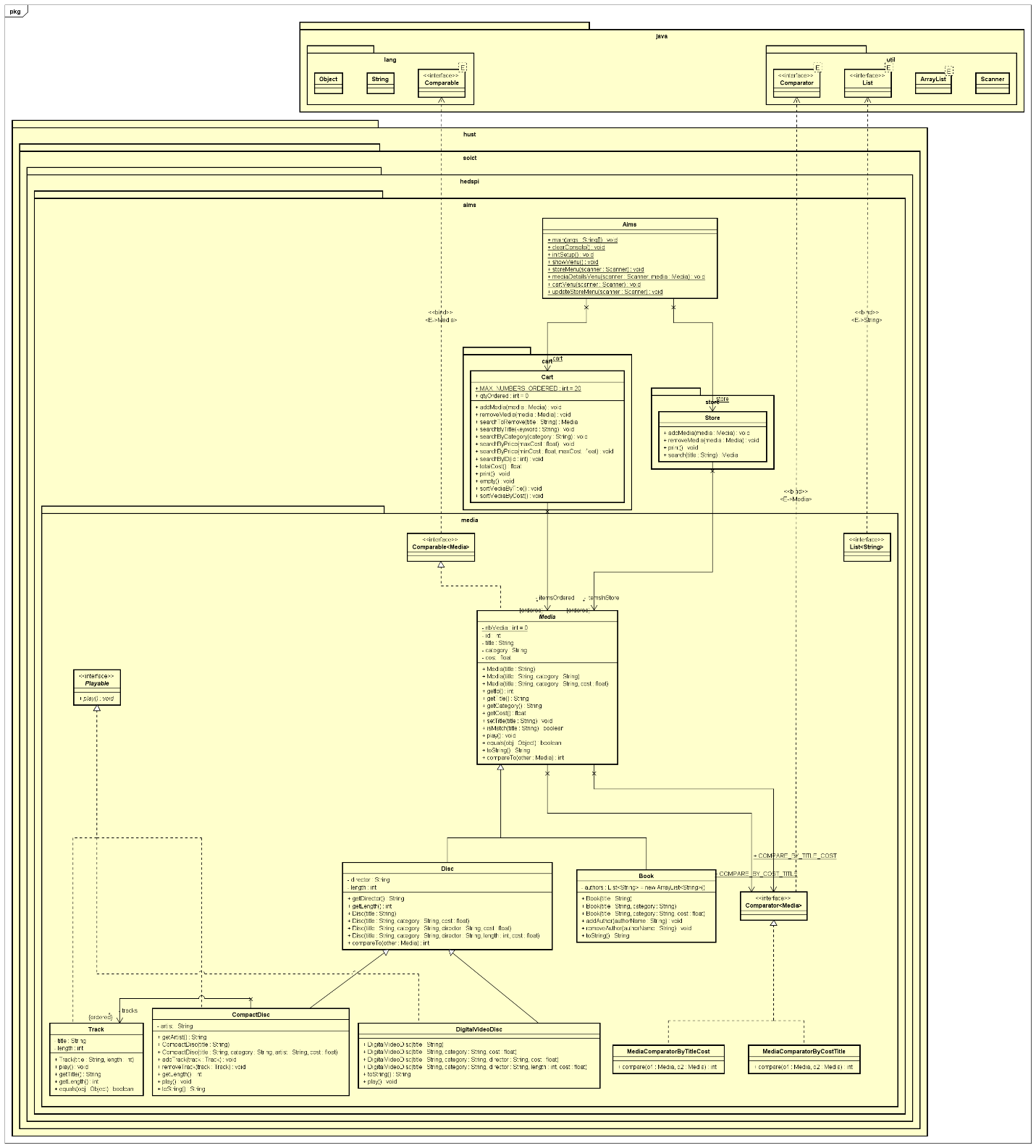
Description automatically generated

1. Diagram
   1. Use case Diagram

A diagram of a computer

Description automatically generated

* 1. Class Diagram



1. Answer Questions

* Question: Alternatively, to compare items in the cart, instead of using Comparator, we can use the Comparable interface and override the compareTo() method. You can refer to the Java docs to see the information of this interface.Suppose we are taking this Comparable interface approach.
* What class should implement the Comparable interface?

Media class should implement the Comparable interface

* In those classes, how should you implement the compareTo()method be to reflect the ordering that we want?

The answer can be found in `src/hust/socit/hedspi/aims/Media.java` file.

* Can we have two ordering rules of the item (by title then cost and by cost then title) if we use this Comparable interface approach?

No we cannot. The Comparable interface assumes that there is only one natural ordering for the objects being compared.

* Suppose the DVDs has a different ordering rule from the other media types, that is by title, then decreasing length, then cost. How would you modify your code to allow this?

We can override the compareTo method in Disc class to reflect the new ordering rule.

The modified code can be found in `src/hust/soict/hedspi/aims/Disc.java` file