

1. Introduction

1.1 Purpose/Project Proposal

The system will be used to buy/rent others' or sell/rent your own antique items. The user can get a list of all the items, add a new category or item, get detailed information about any item or buy/rent whichever item they want.

1.2 Software Language/ Project Environment

JAVA / Console Application

1.3 Data Structures

Tree: Trees are used to divide antiques into categories such as jewelry, furniture, etc. for easier management and usage.

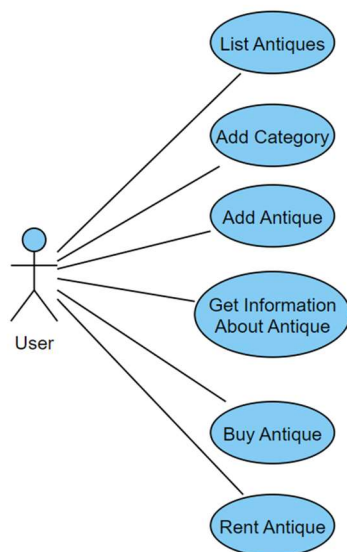
Linked List: Every antique item is stored in a linked list that contains its name, cost, and availability (sold or not).

Array List: Used alongside the tree for category management.

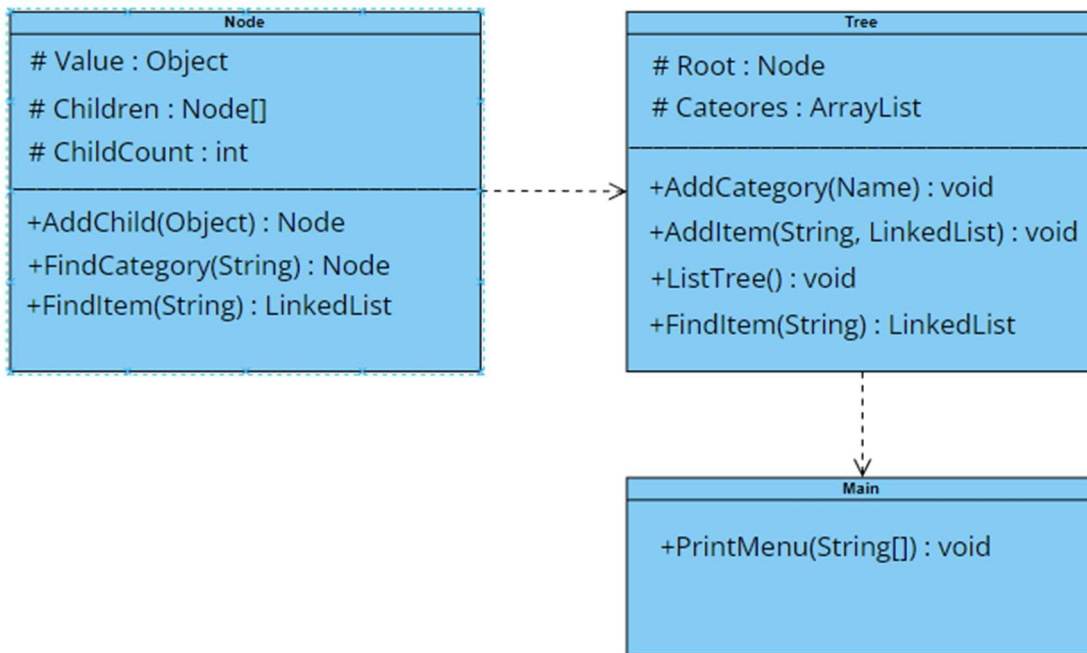
2. Architectural Representation

This part presents the architecture as a series of views. (You will learn how to draw a use case diagram in SEN2022. You have learnt the class diagram from the previous courses. Add your diagrams in this section.)

2.1 Use Case Diagram



2.2 Class Diagram



3. Application

```
Antique items loaded!
What would you liked to do?
OPTIONS:
1 - List all available antiques
2 - Add a new antique category
3 - Add a new item to the category of your choice
4 - Get information about an item
5 - Buy an item
6 - Rent an item
7 - Exit
Your choice:
```

```
Your choice: 1
Jewelry
[Necklace, 25, SOLD]
[Bracelet, 15, RENTED FOR 14 DAYS]
[Earring, 8, FOR SALE]
[Watch, 216, FOR SALE]
Furniture
[Gramophone, 1266, FOR SALE]
[Painting, 578, FOR SALE]
Home Items
[Old glass, 250, FOR SALE]
```

```
Your choice: 3
Item name: Old glass
Item cost: 250
Item history: Old glass belonging to my grandfather
Category name: Home Items
```

```
Your choice: 2
Category name: Home Items
```

```
Your choice: 4
Item name: Watch
Name: Watch
Cost: 216
History: History: Zenith watches, which have been part of numerous challenges throughout its 150-year history, started when Jacot, a 22-year-old young man, decided to create a watch.
Status: FOR SALE
```

```
Your choice: 5
Item name: Necklace
Necklace bought!
```

```
Your choice: 1
Jewelry
[Necklace, 25, FOR SALE]
[Bracelet, 15, FOR SALE]
[Earring, 8, FOR SALE]
[Watch, 216, FOR SALE]
Furniture
[Gramophone, 1266, FOR SALE]
[Painting, 578, FOR SALE]
```

```
Your choice: 6
Item name: Bracelet
Rental length: 14
Bracelet rented for 14 days!
```

4. Conclusion / Summary

Along with the antique market, which is gaining in volume day by day, it brings the need for intermediary applications. That's why we wanted to create an application with a strong multi-functional user and system relationship. The system will be used to buy/rent others or sell/rent your own antiques. The user can get a list of all products, add a new category or product, get information about any product or buy/rent any product. In this way, the interested parties can make their purchases, sales or leasing transactions in a comfortable and easy way.

5. References

https://www.w3schools.com/java/java_linkedlist.asp#:~:text=The%20LinkedList%20class%20is%20a,both%20implement%20the%20List%20interface.

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