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Description: The BST_MelindaVigh_App is used to manipulate the BinarySearchTree_MelindaVigh binary search tree. The program reads information from a file (input.txt) and stores the Artwork_MelindaVigh objects into the binary search tree. Then proceeds to use inOrder Taversal to sort the artworks recursively based on the year the artwork was completed and storing the artworks in order into a fully developed queue (Queue_MelindaVigh).

The user has the option to "add" or "remove" other Artwork_MelindaVigh objects to the binary search tree. They can also "search" if a specific artwork is already in the BST or not. After the user fully done and has inputted "done" then the program will resort the BST using inOrder traversal, store the sorted objects into a queue (Queue_MelindaVigh) before outputting the original sorted list (form input.txt) and the modified sorted list after adding and removing other objects into the output.txt file.

Files included:

Java Files

1. Queue_MelindaVigh.java
2. QueueInterface_MelindaVigh.java
3. BinarySearchTree_MelindaVigh.java
4. BSTInterface_MelindaVigh.java
5. Node.java
6. Artwork_MelindaVigh.java
7. QueueUnderflowException.java
8. QueueOverflowException.java
9. BST_MelindaVigh_App.java

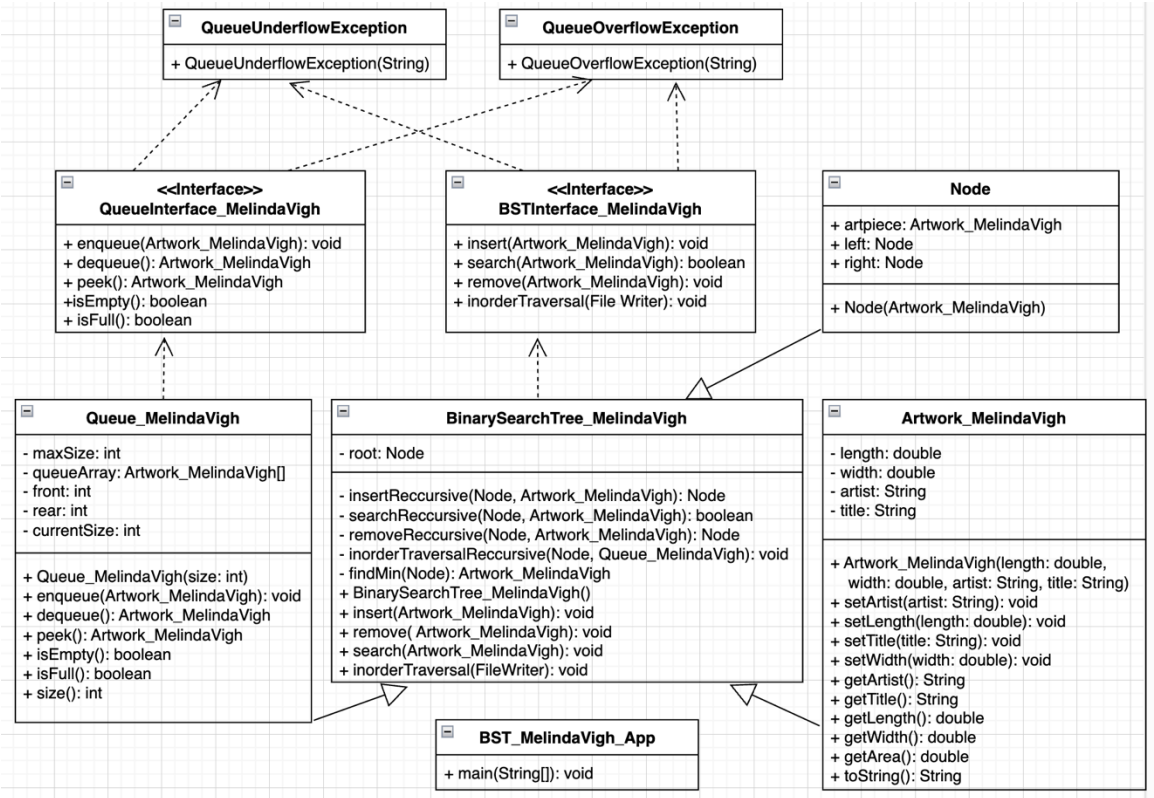
Class Files

10. Queue_MelindaVigh.class
11. QueueInterface_MelindaVigh.class
12. BinarySearchTree_MelindaVigh.class
13. BSTInterface_MelindaVigh.class
14. Node.class
15. Artwork_MelindaVigh.class
16. QueueUnderflowException.class
17. QueueOverflowException.class
18. BST_MelindaVigh_App.class

ReadMe

19. MelindaVigh_ReadMe.txt
20. MelindaVigh_ReadMe.pdf
21. input.txt
22. output.txt

UML Diagram



To run: java BST_MelindaVigh_App.java

Sample input of running the code

Select input **add**:

input **year:** 2007

input **artist name**: “Anna Banana”

input **title**: “Banana”

output: You've successfully added an artwork.

Select input **add**:

input **year:** 2002

input **artist name**: “Bob Peach”

input **title**: “Peach”

output: You've successfully added an artwork.

select input **search**:

input **year:** 2007

input **artist name**: “Anna Banana”

input **title**: “Banana”

output: Banana by Anna Banana from 2007 was found in the tree.

select input **remove**:

input **year:** 2008
input **artist name**: “David Josephs”
input **title**: “Moon”
output: You've successfully deleted an artwork.
select input **done**
output: Thanks! Good bye!
uutput: Results written to ‘output.txt