

DE ANZA'S 22C CAFÉ SIMULATOR

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Comments

Our cafe simulator creates a database of Drink items and offers a virtual platform that mimics a consumer and buyer transaction. Our program implements Hash Tables, Binary Search Trees, and Linear Probes to handle collisions in order to maximize code efficiency & reusability.

Hash Function

```
int _hash(const Drink &key, int size)
{
    string k = key.getName();
    int sum = 0;
    for (int i = 0; k[i]; i++)
        sum += k[i] * k[i] * k[i];
    return sum % size;
}
```

sum of cubes of the ASCII value of each characters + modulus division

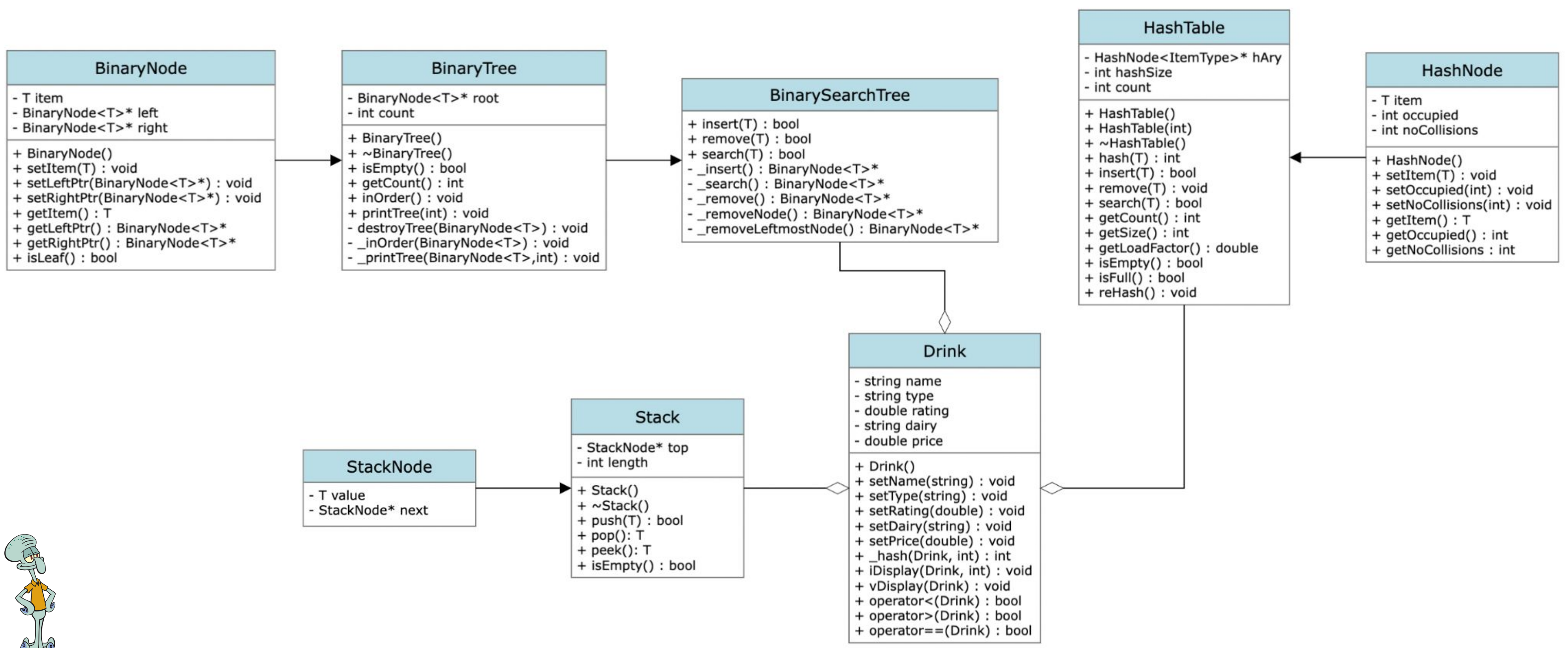
Structure

Main
buildDatabase
menuManager
saveToFile
displayManager
displayMenu
Help
insertManager
Statistics
searchManager
deleteManager
undoDelete

Drink Properties

Drink Name
Type of Drink
Rating
Price
Contains dairy

UML Diagram



Sample Output

```
Welcome to De Anza's 22c Café Simulator!
===== MENU OPTIONS =====
1 - Add Drink
2 - Delete Drink
3 - Undo delete
4 - Search by name
5 - Display all drinks
6 - Write to File
7 - Statistics
8 - Help
9 - Quit
=====
Please choose option 1-9: 1
=====
CREATE A NEW DRINK
Name: Passionfruit Green Tea
Type of Beverage: Tea
Rating (out of 5): 4.3
Dairy (Y/N): No
Price: 3.50
Drink added successfully!
=====
Please choose option 1-9: 2
=====
Enter the name of the drink to delete: Latte
Latte has been deleted!
=====
Please choose option 1-9: 3
=====
Latte added back to menu!
=====
Please choose option 1-9: 4
=====
Enter the name of the drink to search: Latte
Name: Latte
Type: Coffee
Rating: 4.3
Dairy (Y/N): Yes
Price: 3.35
=====
Please choose option 1-9: 9
=====
GOODBYE!
```

Design

