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CS 300

Module 5.2

Manage bids for property auctions using data from two CSV files by implementing a binary search tree algorithm.

**Files Provided:**

1. eBid\_Monthly\_Sales.csv - Contains 17,937 bids.
2. eBid\_Monthly\_Sales\_Dec\_2016.csv - Contains 179 bids.

**Program Overview:** A starter console program is provided, which includes a menu for testing sorting logic. The menu allows you to load bids from a CSV file and offers the following options:

Menu: 1. Load Bids 2. Display All Bids 3. Find a Bid 4. Remove a Bid 9. Exit Enter choice:

The provided BinarySearchTree.cpp program has empty methods that need to be completed to handle interactions with a hash table. You will need to implement the following methods in the binary search tree interface:

public: BinarySearchTree(); virtual ~BinarySearchTree(); void Insert(Bid bid); void Remove(string bidId); Bid Search(string bidId);

**Steps to Complete the Project**

1. **Project Setup:**
   * Create a new C++ Project with the type "Hello World C++ Project".
   * Name the project 'BinarySearchTree' and click Finish.
   * This will create a simple BinarySearchTree.cpp source file under the src directory.
   * Download the starter program and copy the files to the src directory, replacing the auto-generated file.
   * Right-click on the project in the Project Explorer pane and select 'Refresh' to ensure all new files are added to the src folder.
2. **Implementing the Binary Search Tree:**
   * **Internal Structure:** Define the internal structure for tree nodes and any necessary housekeeping variables.
   * **Insert Method:** Implement the logic to insert a bid into the tree.
   * **Remove Method:** Implement the logic to remove a bid from the tree.
   * **Search Method:** Implement the logic to search for a bid in the tree.

**Example Output**

When the program is completed, it will present a menu allowing users to load, display, find, or remove bids, and then exit. Each menu option will interact with the binary search tree appropriately.

By following these steps, you will understand and implement the necessary components to manage bids using a binary search tree.