CIS22C Team 6 demonstration test plan:

Test #	Menu Options	Input	Output	Remarks
1.	T - Show team members (hidden menu option)	Cars successfully loaded from antique_cars.txt Choose from the menu (case insensitive): INS - Insert from file I - Add New Car (insert) D - Delete a Car (Delete) F - Search Manager (Find car by car ID) DIS - Display manager U - Undo delete S - Save to file ST - Hash Statistics T - Show team members (hidden menu option) E - Exit program Enter an option (H - for help):t	Team Members: Ben Katzir Kristine Koo Kelvin Prabhu Mazen Alziq Team Leader: Ferit Kabil	test show team members hidden menu option
2.	H - for help	h	Choose from the menu (case insensitive): INS - Insert from file I - Add New Car (insert) D - Delete a Car (Delete) F - Search Manager (Find car by car ID) DIS - Display manager U - Undo delete S - Save to file ST - Hash Statistics T - Show team members (hidden menu option) E - Exit program Enter an option (H - for help):	Test help menu option to redisplay the menu
3.	DIS - Display Manager	DIS Display Tree? Press any key (press Y for hidden menu option indented tree):y	Indented tree displayed	Verify that BST has been loaded from file and all items are inserted into tree

4.	I - Add New Car (insert)	I Enter car ID: 30 Enter car make: Ford Enter car model: Mustang Enter car year: 1959 Enter car condition: Restored	Cannot add duplicates.	Verify that you cannot add duplicates
5.	DIS - Display Manager	Dis Display Tree? Press any key (press Y for hidden menu option indented tree):Y	Indented tree displayed	Verify duplicate has not been added
6.	I - Add New Car (insert)	I Enter car ID: 63 Enter car make: Ford Enter car model: Mustang Enter car year: 1959 Enter car condition: Restored	Carr successfully added	Verify that insert works when not duplicate
7.	DIS - Display Manager	DIS Display Tree? Press any key (press Y for hidden menu option indented tree):E (or any key)	Inorder tree	Test out the inorder traversal and make sure that item was inserted into tree
8.	F - Search Manager (Find car by CarID	F Enter Car ID [-1 to stop searching]: 63 -1 (-1 will exit search)	Car 63 exists in the data. --- Car ID: 63 Make: Ford Model: Mustang Year: 1959 Condition: Restored ---	Test search function (was hash table updated with pointer to new item)
9.	D - Delete a Car (Delete)	D Enter car ID to delete: 63	Car deleted successfully from the tree. Car deleted successfully from the hash table.	Test delete
10.	F - Search Manager (Find car by CarID	f Enter Car ID [-1 to stop searching]: 63 -1 (-1 will exit search)	Car 63 does not exist.	Test search function and if item was actually deleted and hash table does not

				have pointer to data in BST anymore
11.	DIS - Display Manager	DIS Display Tree? Press any key (press Y for hidden menu option indented tree):y	Indented tree displayed	Verify item was actually deleted from tree
12.	U - Undo delete	u	Undo delete was successful.	Test undo delete
13.	F - Search Manager (Find car by CarID	F Enter Car ID [-1 to stop searching]: 63 -1 (-1 will exit search)	Car 63 exists in the data. ---------- Car ID: 63 Make: Ford Model: Mustang Year: 1959 Condition: Restored ----------	Test search function and if item is back in data and hash table hash table has pointer to data in BST
14.	DIS - Display Manager	DIS Display Tree? Press any key (press Y for hidden menu option indented tree):y	Indented tree displayed	Verify item was actually added back to tree
15.	ST - Hash Statistics	st	Longest Collisions: 24 Total Collisions: 224 Load Factor: 50.8197	Show hash statistics
16.	INS - Insert from file	Ins Enter file name: second_antique_cars.txt	Cars successfully loaded from second_antique_cars.txt	Test insert data from second file
17.	DIS - Display Manager	DIS Display Tree? Press any key (press Y for hidden menu option indented tree):y	Indented tree displayed	Verify that new items were actually inserted into tree
18.	F - Search Manager	F Enter Car ID [-1 to stop	Car 43 exists in the data. ----------	Test search

	(Find car by CarID	searching]: 43 -1 (-1 will exit search)	Car ID: 43 Make: Volvo Model: 240 Year: 1975 Condition: Restored ----------	function (was hash table updated with pointer to new items from second file)
19.	DIS - Display Manager	DIS Display Tree? Press any key (press Y for hidden menu option indented tree):j (or any key)	Inorder tree	Test make sure that items were inserted into tree
20.	ST - Hash Statistics	st	Longest Collisions: 44 Total Collisions: 988 Load Factor: 48.0315	Show hash statistics after inserting from file to verify that rehashing has occured
21.	D - Delete a Car (Delete)	D Enter car ID to delete: 50	Car deleted successfully from the tree. Car deleted successfully from the hash table.	delete
22.	D - Delete a Car (Delete)	D Enter car ID to delete: 51	Car deleted successfully from the tree. Car deleted successfully from the hash table.	delete
23.	U - Undo delete	u	Undo delete was successful.	undo delete
24.	DIS - Display Manager	DIS Display Tree? Press any key (press Y for hidden menu option indented tree):j (or any key)	Inorder tree	51 should be back in the tree but not 50
25.	U - Undo delete	U	Undo delete was successful.	undo delete
26.	DIS -	DIS	Inorder tree	Now 51 and 50

	Display Manager	Display Tree? Press any key (press Y for hidden menu option indented tree):j (or any key)		should be back in the tree
27.	S - Save to file	S	Hash table saved to output.txt	Test that save to file works (check the output file to see if the current data has been written
28.	D - Delete a Car (Delete)	D Enter car ID to delete: 49	Car deleted successfully from the tree. Car deleted successfully from the hash table.	delete
29.	S - Save to file	S	Hash table saved to output.txt	Make sure 49 is not in data anymore
30.	D - Delete a Car (Delete)	D Enter car ID to delete: 48	Car deleted successfully from the tree. Car deleted successfully from the hash table.	delete
31.	E - Exit program	E	Hash table saved to output.txt Exiting program...	Make sure that when program exits and data should be automatically saved to output file, that 48 is not in the data anymore