Turnitin Originality Report

Processed on: 31-Dec-2023 22:07 +08
ID: 2265497746
Word Count: 660
Submitted: 3

Assignment2 By Danial Harriz Mohd Asineh @ Mohd Asneh

Similarity Index	Similarity by Source	
0%	Internet Sources:	0%
	Publications:	0%
	Student Papers:	0%

Department of Computer Science Faculty of Computing Assignment 2 (Linked List Implementation) Programme Subject Code Subject Name Session-Sem : Bachelor of Computer Science (Data Engineering) : SECJ2013 : Data Structure & Algorithm : 2023/2024-1 Prepared by : 1) MUHAMMAD DANIAL BIN AHMAD SYAHIR (A22EC0206) 2) DANIAL HARRIZ BIN MOHD ASINEH @ MOHD ASNEH (A22EC0152) 3) THEVAN RAJU A/L JEGANATH (A22EC0286) Section : 02 Group : DTD Lecturer : Dr. Lizawati Mi Yusuf 1.0
Objective..... 2 2.0
Synopsis..... 2 3.0
Design..... 3 4.0 Implementation Of Linked
List..... 5 5.0 Implementation Of
Sorting..... 5 1.0
Objective The main objective of the program is to create a library management system that is efficient whilst utilizing the linked list data structure. The created system will have the ability to add, find, delete, sort the books in the system, The system can also display the existing list of books.. 2.0 Synopsis Linked list will be used in the program to store information about the books. Each book is represented by an instance of the Book class. The linked list is implemented using the Node and Library classes. Each book is a node. The Library class will have methods that perform operations on the nodes, such as adding new nodes to the list either at the front, middle or end , deleting a node from the front, middle or end., finding specific nodes based on the title or ISBN of the book, sorting the list of books based on different attributes., and displaying books. The system will display a menu that the users can interact with to use the system. 3.0 Design Class Diagram 4.0 Implementation Of Linked List The program's linked list is a crucial component. Book data can be managed dynamically with the help of this data structure. The Library class encompasses functions like appending books to the start, middle, and finish of the list, locating and eliminating books according to their ISBN or title, and organising books according to their ISBN, title, author, year, or sort order. A new book node is added into the list by using the addBookfront function. This function will add a new book that will act as a node to the current list of books. The book will be added to the front of the list. In addition,a new node for book is position at the middle or the linked list.The addBookMiddle can add the book to the middle of the book list.The function make it more organised because it is being updated in the middle of the book list depending on how much the total of books following the file and when inserting a new data. Other than that, users can also add new books to the end of the linked list by using the addBookEnd function. By executing this function, the new book will then appear at the end of the list when the displayBook function is called to

display the books. Next is the findBook function, this will enable the users to find books from the library/linked list based on user input. The user can input either the title of the book or the ISBN number of the book that they want to find. Finally, the deleteNode function can be used to delete the nodes in the data in the file based on the user input. The user can choose to delete the book/node in the front, middle, or end. After the deletion process, the updated list of books will appear and the user can check whether the book is deleted. 5.0 Implementation Of Sorting In the program, sorting is also implemented. The type of sorting that is used in the program is the bubble sort. This type of sorting was chosen because it is straightforward and is easier to implement. The user can choose to sort the list of books by the attributes such as title, author, year of publication and ISBN number. 1 2 3 4 5