**Data Structures Assignment**

I used Linked-List since it is better for manipulating data and it is fast because no shifting is required in memory.

The Linked-List has methods like, add ( ) - I used this method to insert student and teacher’s data into a list. The size () method – I used to get the size/number of students in the list. Remove () - I retrieve and remove first element from list. Iterator () return elements in proper sequence.

I created four classes for the assignment (Student, Teacher, Result, Main and Test). The main method is where teacher, student and result management is done.

1. Get subjects to be done and add in collection(Linked-List)

Prompt the user to enter the number of subjects, using a for loop the user input until the desired result is achieved. Set the user input to subject object and add it to the collection created.

1. Enter number of students to register loop registration till required number is achieved

Prompt the user to enter the number of students and using that loop through a for loop to register students with their name and admission, set the results.

1. we enter the student and marks in the respective subjects by looping

Using the collection method size get the size and loop through a for loop as you add subject, scores and grade to the students, use an if statement to get the grade, set the data and add it to the collection

1. printing in Result class we stored in our collection

To print results create an object of result with an instance of collection and call the method view details to display user details.

1. The remove method is used to remove user detail at a specific position eg. 1.

The subject class contains subject details and its getter, setter and to string method to display subject details.

The Student class contains student details its getter, setter method, to string class to display user details and getSubjectOutput() which gets the output of the subject and is displayed in the toString () method.

The result class contains result method which returns students collection and displays students output using viewDetails () method.

Test class I tested the data types if it is correct in subject class, the char and int primitive data types.