Regn\_2041013280

The Program is based on the concept of single linked list. There are 4 classes named after Student, Node, SinglyLinkedList, and StudentMain. So, Node class consists of two datatypes. One is Class variable of Student and another of Node type. In the Student class there are 3 datatypes and 2 methods for storing name, roll number and marks and setting up student details and displaying them too. StudentMain class consists of calling methods which execute various types of tasks like creation of linked list, displaying the linked list, sorting the linked list, etc.

The SinglyLinkedList class is responsible for various operations to be done in the linked list. First of all node is created, and student details are stored. Then the data of the nodes are displayed. There after the topper of the class is displayed as per the mark secured by them. The failed list is also displayed of the students who secured less than 40 marks. At the last the linked list is sorted and displayed.

**Console:**

1 - Create New List 2 - Display Output 3 - Exit

Enter a option : 1

Enter details for first node

Enter the Name , roll number and mark of the student

abhi

2041013108

78

Do you want to add more nodes?(y/n)

y

Enter the Name , roll number and mark of the student

jeet

2041013053

99

Do you want to add more nodes?(y/n)

y

Enter the Name , roll number and mark of the student

rishi

2041015666

34

Do you want to add more nodes?(y/n)

y

Enter the Name , roll number and mark of the student

suraj

2041013464

12

Do you want to add more nodes?(y/n)

y

Enter the Name , roll number and mark of the student

piyush

2042010108

64

Do you want to add more nodes?(y/n)

n

1 - Create New List 2 - Display Output 3 - Exit

Enter a option : 2

Students results are :

Name of the student is abhi

Roll number of the student is 2041013108

Mark of the student is 78.0

Name of the student is jeet

Roll number of the student is 2041013053

Mark of the student is 99.0

Name of the student is rishi

Roll number of the student is 2041015666

Mark of the student is 34.0

Name of the student is suraj

Roll number of the student is 2041013464

Mark of the student is 12.0

Name of the student is piyush

Roll number of the student is 2042010108

Mark of the student is 64.0

The topper is jeet has secured 99.0 marks

having roll number 2041013053

The failed Students are :

rishi 2041015666 34.0

The failed Students are :

suraj 2041013464 12.0

The sorted list is

Name Roll Mark

jeet 2041013053 99.0

abhi 2041013108 78.0

piyush 2042010108 64.0

rishi 2041015666 34.0

suraj 2041013464 12.0

1 - Create New List 2 - Display Output 3 - Exit

Enter a option : 3

Ending program . .