package collections;

public **class Student** {

private int id;

String name;

public Student(int id, String name) {

this.id = id;

this.name = name;

}

@Override

public String toString() {

return "Student [id=" + this.id + ", name=" + this.name + "]";

}

}

package collections;

import java.util.\*;

public **class Test** {

public static void main(String[] args) {

LinkedList<Student> studentList = new LinkedList<Student>();

System.out.println("\nAdding Student at the end of the list");

studentList.addLast(new Student(16, " Trinity"));

System.out.println("Now the student list contain:");

Iterator<Student> iterator = studentList.iterator();

while (iterator.hasNext()) {

System.out.println(iterator.next() + " ");

}

System.out.println("No of students in the List : " + studentList.size());

System.out.println("\n Adding data at 2nd location:");

studentList.add(1, new Student(7, "Smith"));

System.out.println("Now the student list contain:");

iterator = studentList.iterator();

while (iterator.hasNext()) {

System.out.println(iterator.next() + " ");

}

System.out.println("No of students in the List : " + studentList.size());

// Retrieve first data

System.out.println("\nFirst data: \n" + studentList.getFirst());

// Retrieve last data

System.out.println("\nLast data: \n" + studentList.getLast());

// Retrieve specific data

studentList.add(2, new Student(2, "Fheobe"));

System.out.println("\nData at 3rd position: \n" + studentList.get(2));

// Retrieve first

Student student = studentList.removeFirst();

System.out.println("\nData removed from 1st location: \n" + student);

System.out.println("Now the student list contain:");

iterator = studentList.iterator();

while (iterator.hasNext()) {

System.out.println(iterator.next() + " ");

}

System.out.println("No of students in the List : " + studentList.size());

// Remove 2nd data

Student second = studentList.remove(1);

System.out.println("\nData removed from 2nd location: \n" + second);

// Remove last

Student last = studentList.removeLast();

System.out.println("\nStudent removed from last location: \n" + last);

System.out.println("Now the student list contain:");

iterator = studentList.iterator();

// After removing data

while (iterator.hasNext()) {

System.out.println(iterator.next() + " ");

}

System.out.println("No of students in the List : " + studentList.size());

// Remove All

studentList.clear();

if (studentList.isEmpty()) {

System.out.println("\nLinked list is empty");

} else {

System.out.println("Linked list size: " + studentList.size());

}

}

}

