Martin Hynes

16390836

Assignment 8

Person.java

```java
public class Person{//open Class

        //define instance variables

        private String name;


        public Person(){//open constructor

                this.name = "unassigned";

        }//close constructor


        public Person(String Name){//open overload constructor

                this.name = Name;

        }//close overload constructor


        public void setName(String Name){//open setter

                this.name = Name;

        }//close setter


        public String getName(){//open getter

                return this.name;

        }//close getter


        public String toString(){//open toString override

                return "Person named "+this.name;
```

```java
    }//close toString override

}//Close Class


PersonTest.java

//import java utils for Lists and Iterators

import java.util.*;


public class PersonTest{//open class


    public static void main(String[] args){//open main method

        //create linkedlist of person objects

        LinkedList<Person> People = new LinkedList<Person>();

        //create 4 Person objects and add to LinkedList

        Person p1 = new Person("Adam");

        Person p2 = new Person("Bob");

        Person p3 = new Person("Charlie");

        Person p4 = new Person("Darrah");

        People.add(p1);

        People.add(p2);

        People.add(p3);

        People.add(p4);


        //enhanced for loop to print the overriden toString meethod of each object

        for(Person p:People){//open enhanced for loop

            System.out.println(p.toString());

        }//close enhanced for loop
```

```java
//remove the Person object at index 3

People.remove(3);


//Create a ListIterator object

ListIterator<Person> itr = People.listIterator();

//while loop to use iterator to print toString going forward through list

while(itr.hasNext()){//open while loop

        System.out.println(itr.next().toString());

}//close while loop

//while loop to iterate backwards through list

while(itr.hasPrevious()){//open while loop

        System.out.println(itr.previous().toString());

}//close while loop

//Test search method

System.out.println(search("Charlie",People));
}//close main method


//search methods takes Name and List args
public static String search(String Name,LinkedList<Person> People){//open search method

        //initialize position to -1

        int pos = -1;

        //for loop to search list for name

        for(int i=0;i<People.size();i++){//open for loop

                //if name found in list, position = i

                if(People.get(i).getName().equals(Name)){//open if condition

                        pos = i;

                }//close if condition
```

```
        }//close for loop

        //if position was not changed, name wasnt found

        if(pos == -1){//open if condition

                //return name not found

                return Name+" not found in list.";

        }else{//close if, open else condition

                //return Name and position

                return Name+" found at position "+pos;

        }//close else condition

    }//close search meethod

}//close class
```

```
D:\Users\marti\Files\Programming\Java\OOP1\Assignment8>java PersonTest
Person named Adam
Person named Bob
Person named Charlie
Person named Darrah
Person named Adam
Person named Bob
Person named Charlie
Person named Charlie
Person named Bob
Person named Adam
Charlie found at position 2
```