**Requirement**

1. Follow the slide show and the video in the resources below.
2. You are to create all the methods described in the slideshow.
3. You need to make a new class called CSTLinkedList which is generic. You can choose the name of your generic type, like "R".
4. You need to make a inner class called Node which is generic inside of CSTLinkedList. You can choose the name of generic, like "T".
   1. The Node class will have a value of type R called "data" and a value of type Node<R> called "next".
   2. The constructor will take one argument of type R.
   3. Overide hashCode, equals and toString.
5. create Junit Test.
6. All these details are available in the uml diagram attached and the documentation provided in the interface attached.

**Bonus**

This is an All or nothing bonus, worth +10 marks. Meaning no partial marks outside of the 5, 2.5 and 2.5 break down below. i highly recommend finish the basic requirements first then attempt the bonus as many of the components will have already been finished. this is the bonus meaning it is up to you to research it, if you ask for help you will be guided to correct direction but you have to do the research for it.

1. instead of implementing CSTList, fully implement java.util.List. worth 5 marks.
   1. when implementing the java.util.List you will have to change the signature of some of your existing methods. that is absolutely okay to do.
2. fully implement java.util.Iterator as an inner class within your CSTLinedList which you will return using iterator() method. worth 2.5 marks.
3. fully implement java.util.ListIterator as an inner class within your CSTLinedList which you will return using listIterator() method. worth 2.5 marks.

**Resources**

1. [LinkedList slide show](https://brightspace.algonquincollege.com/d2l/common/dialogs/quickLink/quickLink.d2l?ou=227362&type=content&rcode=5D0A62E3-9FCD-4186-8FE2-4DAA73394FE0-715806)
2. [Singly Linked List Video Lecture](https://brightspace.algonquincollege.com/d2l/common/dialogs/quickLink/quickLink.d2l?ou=227362&type=content&rcode=5D0A62E3-9FCD-4186-8FE2-4DAA73394FE0-2042986)