**Assisted Practice: 4.6 Circular Linked List**

This section will guide you to:

* Write a program in Java to insert a new element in a sorted circular linked list
* Use Eclipse (the popular text editor for Java programs)
* Push code to Git

This lab has three subsections, namely:

* + 1. Creating a new project in Eclipse
    2. Writing the program in Java
    3. Pushing the created files to Git

**Step 4.6.1:** Creating a new project in Eclipse

* Open Eclipse
* Go to File -> New -> Project -> Java Project -> Next
* Type in any project name and click on Finish
* Select your project and go to File -> New -> Class
* Enter **LinkedList** in class name, check the checkbox **public static void m**
* **ain(String args)**, and click on Finish

**Step 4.6.2:** Writing the program in Java

You need to now write the program to insert a new element in a sorted circular linked list.

public class LinkedList

{

static class Node

{

int data;

Node next;

Node(int d)

{

data = d;

next = null;

}

}

Node head;

LinkedList()

{

head = null;

}

void sortedInsert(Node new\_node)

{

Node current = head;

if (current == null)

{

new\_node.next = new\_node;

head = new\_node;

}

else if (current.data >= new\_node.data)

{

while (current.next != head)

current = current.next;

current.next = new\_node;

new\_node.next = head;

head = new\_node;

}

else

{

while (current.next != head && current.next.data < new\_node.data)

current = current.next;

new\_node.next = current.next;

current.next = new\_node;

}

}

void printList()

{

if (head != null)

{

Node temp = head;

do

{

System.out.print(temp.data + " ");

temp = temp.next;

} while (temp != head);

}

}

public static void main(String[] args)

{

LinkedList list = new LinkedList();

int arr[] = new int[] {12, 56, 2, 11, 1, 90};

Node temp = null;

for (int i = 0; i < 6; i++)

{

temp = new Node(arr[i]);

list.sortedInsert(temp);

}

list.printList();

}

}

**Output:**



**Step 4.6.3:** Pushing the created files to Git

* Open your command prompt and navigate to the folder where you have created your files.

**cd <folder path>**

* Initialize your repository using the following command:

**git init**

* Add all the files to your git repository using the following command:

**git add .**

* Commit the changes using the following command:

**git commit . -m “Changes have been committed.”**

* Push the files to the folder you initially created using the following command:

**git push -u origin master**