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| ***Roll No*** | ***22SW040*** |
| ***Section*** | ***01*** |
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| ***LAB No*** | ***07*** |

***Task#01 (PhotoViewer App) PhotoViwer is one of the most used web apps which comes pre-installed on windows 10 devices and there are several different apps that are present in Google Play to view the media files present in your device. You must create a PhotoViwer app in which you can view all the photos which you have stored on your device. Along with that, you can view the individual photos in our app as well. The PhotoViwer application is having the following view functions 1. Previous: View Previous image 2. Next: View the next image 3. SlideShow: display all stored images Other functions of PhotoViwer are 1. Add new image 2. Rename/Update an image 3. Delete an image 4. Search any image 5. Counter: display the total number of images stored***

***Source Code***

***package Linked\_List\_Practice.DSA\_LAB\_07;  
  
  
import java.util.Objects;  
  
public class PhotoViewer {  
  
 protected static class Node {  
 String data;  
 Node next;  
 Node prev;  
  
 public Node(String data) {  
 this.data = data;  
 this.next = this.prev = null;  
 }  
 public void slideShow(Node head){  
 Node temp = head;  
 System.out.println("Displaying all Images");  
 while (temp!=null){  
 System.out.println("Image : " + temp.data );  
 temp=temp.next;  
 }  
 System.out.println();  
 }  
  
 public void prev(Node head) {  
 if (head == null || head.prev == null) {  
 System.out.println("There is no previous image.");  
 return;  
 }  
 System.out.println("Prev: " + head.prev.data);  
 }  
 public void next(Node head) {  
 if (head == null || head.next == null) {  
 System.out.println("There is no next image.");  
 return;  
 }  
  
 System.out.println("Next: " + head.next.data);  
 }  
  
 public Node addImageAtStart(Node head , String newImage){  
 Node newNode = new Node(newImage);  
 newNode.next=head;  
 head=newNode;  
 System.out.println("Added SuccessFully ");  
 return head;  
 }  
 public Node addImageAtEnd(Node head, String newImage) {  
 Node newNode = new Node(newImage);  
 if (head == null) {  
 return newNode;  
 }  
  
 Node temp = head;  
 while (temp.next != null) {  
 temp = temp.next;  
 }  
  
 temp.next = newNode;  
 newNode.prev = temp;  
  
 System.out.println("Added Successfully");  
 return head;  
 }  
  
 public void renameOrUpdateImage(Node head , String oldName , String newName ){  
 Node temp = head;  
 while (temp!=null){  
 if(Objects.equals(temp.data, oldName)){  
 temp.data = newName;  
 System.out.println("Updated SuccessFully");  
 return;  
 }  
 temp=temp.next;  
 }  
 }  
 public Node deleteImage(Node head , String name ){  
 if (head == null) {  
 System.out.println("List is empty.");  
 return null;  
 }  
  
 if (head.data.equals(name)) {  
  
 head = head.next;  
 if (head != null) {  
 head.prev = null;  
 }  
 System.out.println("Deleted Successfully");  
 return head;  
 }  
  
 Node temp = head;  
 while (temp.next!=null){  
 if(temp.next.data.equals(name)){  
 temp.next = temp.next.next;  
 if(temp.next!=null){  
 temp.next.prev=temp;  
 }  
 System.out.println("Deleted Successfully");  
 return head;  
 }  
 temp=temp.next;  
 }  
 System.out.println("Deleted Successfully");  
 return head;  
  
  
 }  
 public boolean searchImage(Node head , String image){  
 Node temp = head;  
 while (temp!=null){  
 if(temp.data.equals(image)){  
 return true;  
 }  
 temp=temp.next;  
 }  
 return false;  
 }  
 public int counter(Node head){  
 Node temp = head;  
 int count =0;  
 while (temp!=null){  
 count++;  
 temp=temp.next;  
 }  
 return count;  
 }  
  
 }  
  
 public static void main(String[] args) {  
 PhotoViewer.Node i1 = new Node("Cat.jpg");  
 PhotoViewer.Node i2 = new Node("Dog.jpg");  
 PhotoViewer.Node i3 = new Node("Loin.png");  
 PhotoViewer.Node i4 = new Node("Wolf.png");  
 PhotoViewer.Node i5 = new Node("Fox.png");  
 i1.next=i2;  
 i2.prev=i1;  
 i2.next=i3;  
 i3.prev=i2;  
 i3.next=i4;  
 i4.prev=i3;  
 i4.next=i5;  
 i5.prev=i4;  
 System.out.println();  
 System.out.println("Total Images int the PhotoViewer App : " + i1.counter(i1) );  
 System.out.println();  
 i1.slideShow(i1);  
  
 try {  
 i1.prev(i1);  
 } catch (NullPointerException e){  
 System.out.println("There is no previous exist to that Image");  
 }  
 System.out.println();  
  
i1.next(i1);  
 System.out.println();  
i1 = i1.addImageAtStart(i1,"Elephant");  
i1 = i1.addImageAtEnd(i1,"Pink Panther");  
  
 i1.slideShow(i1);  
 System.out.println();  
 i1.renameOrUpdateImage(i1,"Cat.jpg","Kitten.jpg");  
 i1.slideShow(i1);  
 System.out.println();  
 i1 = i1.deleteImage(i1,"Kitten.jpg");  
 System.out.println();  
 i1 = i1.deleteImage(i1 , "Pink Panther");  
 System.out.println();  
 i1.slideShow(i1);  
 System.out.println();  
System.out.println("Image Found Or Not : ? : "+i1.searchImage(i1,"Loin.png"));  
System.out.println("Image Found Or Not : ? : "+i1.searchImage(i1,"Kitten.png"));  
 System.out.println();  
System.out.println("Total Image in the Photo Viewer App : " + i1.counter(i1) );  
 }  
  
  
  
}***

***Output Screen Shots***

***A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated***