

Assignment 5 pseudocodes

1. CLASS BirdSurveyLinkedList
BEGIN

private Node first

CLASS Node
BEGIN

String bird
Node next
int total

CONSTRUCTOR Node(String bird, node newNode, int total)
BEGIN
 this.bird ← bird
 this.next ← newNode
 this.total ← total
END CONSTRUCTOR

METHOD void setBird(String bird)
BEGIN
 this.bird ← bird
END METHOD

METHOD String getBird()
BEGIN
 RETURN bird
END METHOD

METHOD int getTotal()
BEGIN
 RETURN total
END METHOD

METHOD void setTotal(int total)
 this.total ← total
END METHOD

END CLASS

CONSTRUCTOR BirdSurveyLinkedList()

 first ← null

END CONSTRUCTOR

METHOD void add(String birdName)

BEGIN

 IF(first==null) THEN

 First ← NEW Node(birdName ,null, 1)

 ELSE

 boolean found ← false

 Node curr ← first

 WHILE(curr!=null && !found)

 IF(curr.bird.equals(birdName)) THEN

 found ← true

 BREAK

 ELSE

 curr ← curr.next

 END IF

 END WHILE

 IF(found) THEN

 curr.setTotal(curr.getTotal()+1)

 ELSE

 first ← new node(birdName, first, 1)

 END IF

 END IF

END METHOD

METHOD int getTotal(String birdName)

BEGIN

 Node curr ← first

 WHILE(curr!=null)

 IF(curr.bird.equals(birdName))

 RETURN curr.getTotal()

 END IF

 curr ← curr.next

 END WHILE

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    RETURN 0
END METHOD
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METHOD void getReport()
BEGIN
    Node curr ← first
    WHILE(curr != null)
        PRINT "Bird Name is " + curr.getBird() + " and count is "
        " + curr.getTotal()
        curr ← curr.next
    END WHILE
END METHOD
END CLASS
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CLASS Main
BEGIN
    METHOD main()
    BEGIN
        CREATE list AS BirdSurveyLinkedList
        list ← NEW BirdSurveyLinkedList
        String birdName
        READ user input for a bird name
        PRINT "Enter a name of the bird (Enter NO if you don't want to
enter any birds): "
        birdName ← user input for the bird name

        WHILE(!birdName.equals("NO"))
            list.add(birdName)
            PRINT "Added" + birdName + " and there is now"
            + list.getTotal(birdName) + " of them"
            PRINTLINE()
            READ user input for the name of the bird
            PRINT "Enter the name of another bird(write NO if you want
to enter any other bird name): "
            birdName ← user input for the bird name
        END WHILE

        PRINTLINE()
        PRINT "Enter the name of the bird for which you want to get
count (Enter NO if you don't want the count of any birds ): "
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        birdName ← user input of the bird name

    WHILE (!birdName.equals("NO"))
        PRINT "Counted " + list.getTotal(birdName) + "
            " + birdName + "(s)"
        PRINTLINE()
        PRINT "Enter the name of the bird for which you want to get
            count (Enter NO when you don't want the count of any other
            bird): "
        birdName ← Read the user input for bird name
    END WHILE

    PRINTLINE()
    PRINT "Report of all birds"
    List.getReport()
END main
END CLASS

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