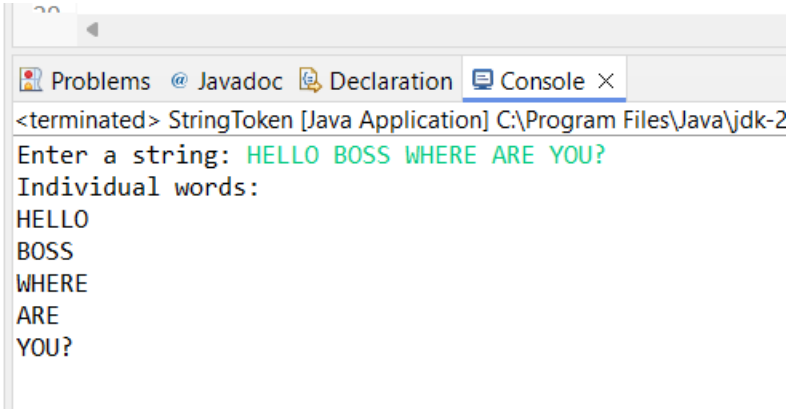
1. Write a Java program that reads a string from the user and uses StringTokenizer to split the string into individual words. Print each word on a new line.

CODE:-

```
package lab_5;

import java.util.Scanner;

import java.util.StringTokenizer;

public class StringToken {



    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);


        // Prompt the user to enter a string

        System.out.print("Enter a string: ");

        String input = sc.nextLine();


        // Using StringTokenizer to split the string into words

        StringTokenizer tokenizer = new StringTokenizer(input);


        // Printing each word on a new line

        System.out.println("Individual words:");

        while (tokenizer.hasMoreTokens()) {

            String word = tokenizer.nextToken();

            System.out.println(word);

        }
```

```
        sc.close();
    }
}
```

OUTPUT:-



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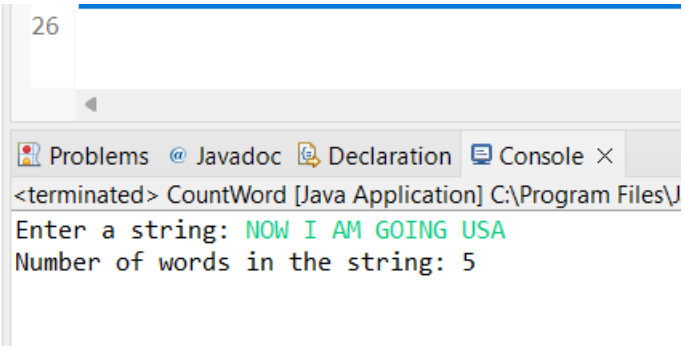
2. Write a Java program that reads a string from the user and uses StringTokenizer to count the number of words in the string.

CODE:-

```
package lab_5;
import java.util.Scanner;
import java.util.StringTokenizer;

public class CountWord {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        // Prompt the user to enter a string
        System.out.print("Enter a string: ");
        String input = sc.nextLine();

        // Using StringTokenizer to count the number of words
        StringTokenizer tokenizer = new StringTokenizer(input);
        int wordCount = tokenizer.countTokens();

        // Print the number of words
```

```
            System.out.println("Number of words in the string: " + wordCount);

            sc.close();
        }
}
```

OUTPUT:-



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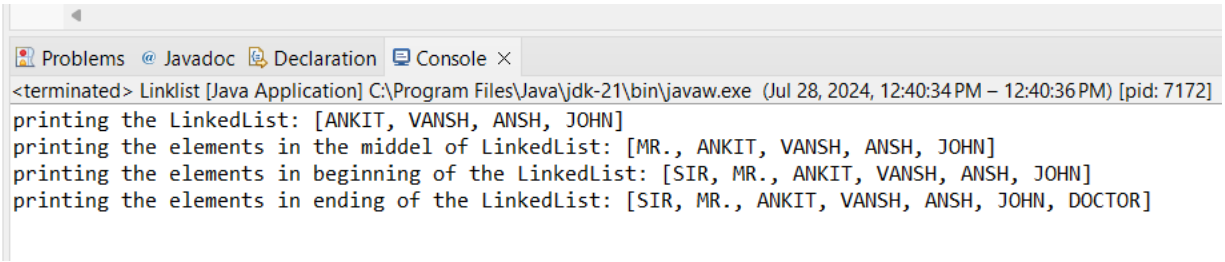
3. Write a Java program to create a LinkedList of strings, add elements at specific positions (beginning, middle, end), and print the list.

CODE:-

```
package lab_5;
import java.util.*;
public class Linklist {

    public static void main(String[] args) {

        //creating the object of linked list
        LinkedList<String>a=new LinkedList<String>();

        //adding the elements in the linked list
        a.add("ANKIT");
        a.add("VANSH");
        a.add("ANSH");
        a.add("JOHN");

        //printing the linked list
        System.out.println("printing the LinkedList: "+a);

        //adding element in the middle of linked list
        a.add(0,"MR.");
```

```
        System.out.println("printing the elements in the middel of LinkedList: "+a);

        //adding elements in the beginning of the linked list
        a.addFirst("SIR");
        System.out.println("printing the elements in beginning of the LinkedList: "+a);

        //adding the elements in ending of linked list
        a.addLast("DOCTOR");
        System.out.println("printing the elements in ending of the LinkedList: "+a);


    }

}
```

OUTPUT:-



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4. Write a Java program to sort a given array list.

CODE:-

```
package lab_5;
import java.util.ArrayList;
import java.util.Collections;

public class ShortArray {


    public static void main(String[] args) {
        // Create an ArrayList of integers
        ArrayList<Integer> numbers = new ArrayList<>();

        // Add elements to the ArrayList
        numbers.add(5);
        numbers.add(1);
        numbers.add(8);
```

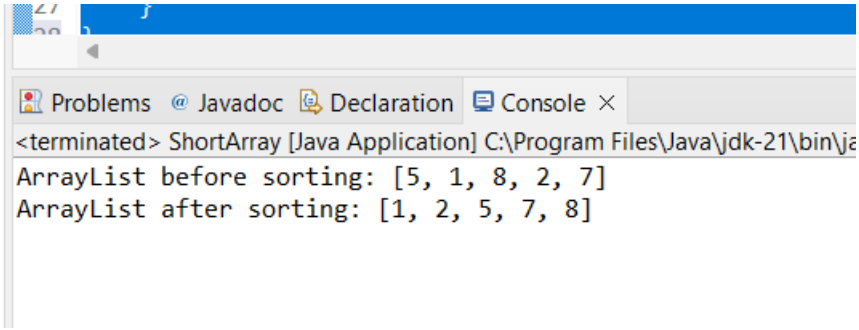
```
        numbers.add(2);
        numbers.add(7);

        // Print the ArrayList before sorting
        System.out.println("ArrayList before sorting: " + numbers);

        // Sort the ArrayList
        Collections.sort(numbers);

        // Print the ArrayList after sorting
        System.out.println("ArrayList after sorting: " + numbers);
    }
}
```

OUTPUT:-



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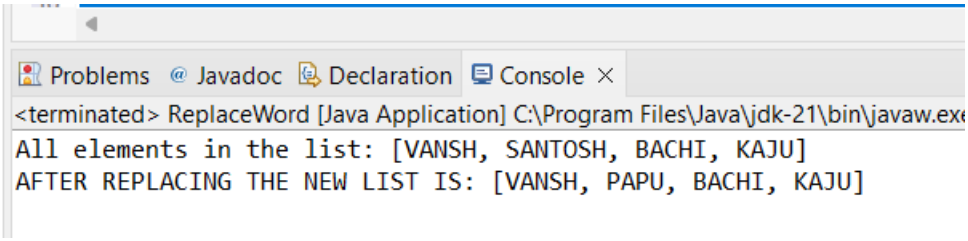
5. Write a Java program to replace the second element of an ArrayList with the specified element.

CODE:-

```
package lab_5;
import java.util.*;
public class ReplaceWord {

    public static void main(String[] args) {

        //creating the LinkedList object
        LinkedList<String>a=new LinkedList<String>();

        //adding elements in list
        a.add("VANSH");
        a.add("SANTOSH");
        a.add("BACHI");
        a.add("KAJU");
```

```
        //printing the all elements
        System.out.println("All elements in the list: "+a);

        //replacing the elements
        a.set(1, "PAPU");

        //printing the replacing elements
        System.out.println("AFTER REPLACING THE NEW LIST IS: "+a);

    }

}
```

OUTPUT:-



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6. Write a Java program to iterate a linked list in reverse order.

CODE:-

```
package lab_5;

import java.util.*;

import java.util.Collections;

public class ReverseOrder {


    public static void main(String[] args) {


        //creating the object of the LinkedList

        LinkedList<String>list=new LinkedList<String>();


        //importing the elements in the list

        list.add("VANSH");
```

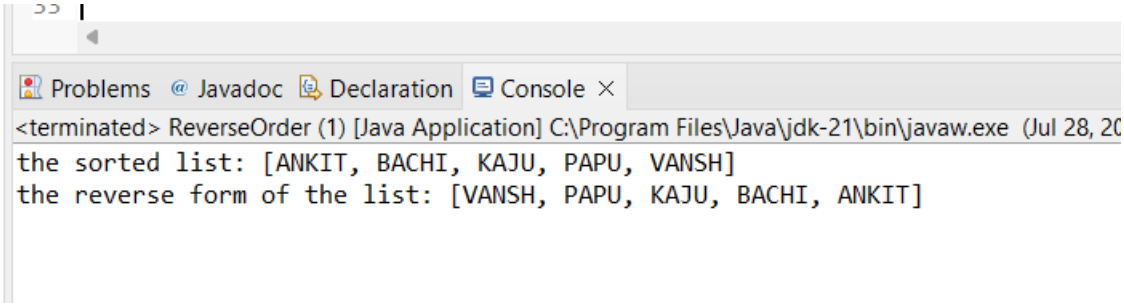
```
        list.add("KAJU");
        list.add("BACHI");
        list.add("PAPU");
        list.add("ANKIT");

        //printing the original elements in the list
        Collections.sort(list);
        System.out.println("the sorted list: "+list);

        //implementing the logic for reversing the elements
        Collections.sort(list,Collections.reverseOrder());

        System.out.println("the reverse form of the list: "+list);
    }
}
```

OUTPUT:-



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7. Write a Java program to retrieve, but not remove, the last element of a linked list.

CODE:-

```
package lab_5;
import java.util.*;
public class Retrive {

    public static void main(String[] args) {
```

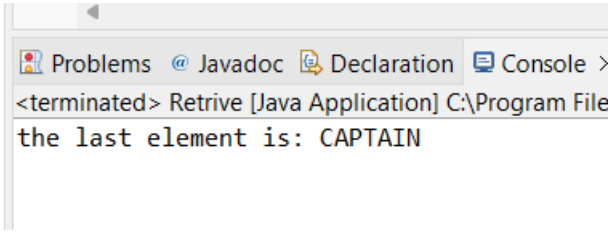
```
        //creating the object object of the linked list
        LinkedList<String>a=new LinkedList<String>();

        //importing the element in the list
        a.add("VANSH");
        a.add("ANSH");
        a.add("ANKIT");
        a.add("CAPTAIN");

        //retrive but not delete last elememt
        String lastElement=a.getLast();

        //printing the values in the list
        System.out.println("the last element is: "+ lastElement);
    }
}
```

OUTPUT:-



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8. Write a Java program to create a LinkedList of integers and print all the elements.

CODE:-

```
package lab_5;
import java.util.*;
public class LinklistOfInteger {

    public static void main(String[] args) {
        // TODO Auto-generated method stub

        //Creating the object of linked list
        LinkedList<Integer>a=new LinkedList<Integer>();

        //importing the element
        a.add(1);
        a.add(5);
```

```
        a.add(6);
        a.add(9);
        a.add(3);

        //printing the elements
        System.out.println("the integer numbers in the list are: "+a);

    }
}
```

OUTPUT:-