LAB Solution

Thursday 7/29/2008

1. Create a `ReverseOrder` class that includes the array numbers is declared to have 10 elements. This program reads a list of numbers from the user, storing them in the 10 element array, then prints them in the opposite order.

```
import java.io.*;

public class ReverseOrder {
   public static void main (String[] args) throws IOException{
      int[] numbers = new int[10];
      String Input;

      BufferedReader ReadInput = new BufferedReader(new
InputStreamReader(System.in));

      System.out.println("The size of the array: " + numbers.length);

      for (int index = 0; index < numbers.length; index++)
      {
         System.out.print("Enter number " + (index + 1) + ": ");
         Input = ReadInput.readLine();
         numbers[index] = Integer.parseInt(Input);
      }

      System.out.println("The numbers in reverse order:");

      for (int index = numbers.length-1; index >= 0; index--)
         System.out.print(numbers[index] + " ");
   }
}
```

2. Create a `LetterCount` class that reads a sentence from the user and counts the number uppercase and lowercase letters contained in it.

```
import java.io.*;

public class LetterCount{
   public static void main(String[] args) throws IOException {
      final int NUMCHARS = 26;
      int[] upper = new int[NUMCHARS];
      int[] lower = new int[NUMCHARS];

      char current;  // the current character being processed
      int other = 0;    // counter for non-alphabetics

      String Input;

      BufferedReader ReadInput = new BufferedReader(new
InputStreamReader(System.in));
```

```
        Input = ReadInput.readLine();

        for (int ch = 0; ch < Input.length(); ch++){
           current = Input.charAt(ch);
           if (current >= 'A' && current <= 'Z')
              upper[current - 'A']++;
           else if (current >= 'a' && current <= 'z')
              lower[current - 'a']++;
           else
              other++;
        }

        System.out.println();

        for (int letter = 0; letter < upper.length; letter++){
           System.out.print ((char)(letter + 'A'));
           System.out.print (": " + upper[letter]);
           System.out.print ("\t\t" + (char)(letter + 'a'));
           System.out.println (": " + lower[letter]);
        }

        System.out.println();
        System.out.println("Non-alphabetic characters: " + other);
     }
  }
```