Sample Program 11.1

About Arrays

Problem statement. Write a declaration statement to create an uninitialized `int` array named `a`, of fixed size 100.

Solution.

```
int[] a = new int[100];
```

Problem statement. Write a code block to sort the above array from lo-to-hi, and output the minimum and maximum values.

Solution.

```
Arrays.sort(a);  // requires import java.util;
System.out.println("The minimum value is " + a[0]);
System.out.println("The maximum value is " + a[a.length – 1]);
```

Problem statement. Write a code block to output the above sorted array, with labels.

Solution.

```
for (int i = 0; i < a.length; i++)
  System.out.println("a[" + i + "] = " + a[i]);
```

Problem statement. Write a code block to search the above sorted array for any negative value.

Solution.

```
boolean found = false;
for (int i = 0; i < a.length; i++)
{
  if (a[i] < 0)
  {
    found = true;
    break;
  }
}

if (found)
  System.out.println("At least one neg value found in the array 'a'.");
else
  System.out.println("No negative values found in the array 'a'.");
```

Problem statement. Write a declaration statement to create an uninitialized dynamic array of strings, named `s`.

Solution.

```
int size;
System.out.print("What size do you want for the array [1 or greater]? ");
size = new Double(cin.readLine()).intValue(); // requires cin

String[] s = new String[size];
```

Problem statement. Write a code block to sort the above array alphabetically, and output the minimum and maximum values.

Solution.

```
Arrays.sort(s);  // requires import java.util;
System.out.println("The minimum value is " + s[0]);
System.out.println("The maximum value is " + s[s.length - 1]);
```

Problem statement. Write a code block to output the above sorted array, with labels.

Solution.

```
for (int i = 0; i < s.length; i++)
  System.out.println("s[" + i + "] = " + s[i]);
```

Problem statement. Write a code block to count the number of blanks in the above array.

Solution.

```
int nBlanks = 0;
for (int i = 0; i < s.length; i++)
  if (s[i].length() == 0)
    nBlanks++;

System.out.println("#of blanks found in the array 's': " + nBlanks);
```