1 solutions

```java
import java.util.Scanner;


public class ArrayRecursor{
  public static int fill(int array[], Scanner s) {
    return fill(array, s,0);
  }
  private static int fill(int array[], Scanner s,int start) {
    if(start == array.length)
      return 0;
    System.out.print("Enter number " + start + ":");
    int temp = s.nextInt();
    if(temp == -1)
      return 0;
    else {
      array[start] = temp;
      return 1 + fill(array, s, start + 1);
    }
  }



  public static int count(int array[]) {
    return count(array, 0);
  }
  private static int count(int array[], int start) {
    if(start == array.length || array[start] == -1)
      return 0;
    return 1 + ArrayRecursor.count(array, start+1);
  }


  public static int sum(int array[]) {
    return sum(array, 0);
  }
  private static int sum(int array[], int start) {
    if(start == array.length  || array[start] == -1)
      return 0;
    return array[start] + ArrayRecursor.sum(array,start+1);
  }


  public static void printArray(int array[]) {
    System.out.print("[");
    printArray(array, 0);
    System.out.print("]");
  }
  private static void printArray(int array[], int start) {
    System.out.print(array[start]);
    if(start + 1 < array.length && array[start + 1] != -1) {
      System.out.print(",");
      ArrayRecursor.printArray(array, start+1);
    }
  }


```

```
57   public static void printReverse(int array[]) {
58     System.out.print("[");
59     printReverse(array, 0);
60     System.out.print("]");
61   }
62   private static void printReverse(int array[], int start) {
63     if(start + 1 < array.length && array[start+1] != -1) {
64       ArrayRecursor.printReverse(array, start+1);
65       System.out.print(",");
66     }
67     System.out.print(array[start]);
68   }
69
70   public static void main(String[] args) {
71     int choice = 0;
72     int arr[] = new int[10];
73     Scanner input = new Scanner(System.in);
74     for(int i = 0; i < 10; i ++)
75       arr[i] = -1;
76
77     do{
78       System.out.println("1) Fill new array");
79       System.out.println("2) Count elements");
80       System.out.println("3) Calculate sum of elements");
81       System.out.println("4) Print the array");
82       System.out.println("5) Print array in reverse order");
83       System.out.println("6) Quit");
84       choice = input.nextInt();
85       switch(choice) {
86         case 1:
87           for(int i = 0; i < 10; i ++)
88             arr[i] = -1;
89           ArrayRecursor.fill(arr,input);
90         break;
91         case 2:
92           System.out.println("Number of elements is " + ArrayRecursor.count(
     arr));
93         break;
94         case 3:
95           System.out.println("Sum of elements is " + ArrayRecursor.sum(arr));
96         break;
97         case 4:
98           System.out.print("The array is ");
99           ArrayRecursor.printArray(arr);
100          System.out.println("");
101        break;
102        case 5:
103          System.out.print("The array in reverse order is:");
104          ArrayRecursor.printReverse(arr);
105          System.out.println("");
106        break;
107        case 6:
108          System.out.println("Bye.");
109        break;
110      }
111    }while(choice != 6);
112  }
113 }
```