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Fundamentals of Programing I – CSIT 111_04
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Lab 08 Report

Exercise 1: Tracking Sales

File Sales.java contains a Java program that prompts for and reads in the sales for each of 5 salespeople in a company. It then prints out the id and amount of sales for each salesperson and the total sales. Study the code, then compile and run the program to see how it works. Now modify the program as follows:

1. Compute and print the average sale. (You can compute this directly from the total; no loop is necessary.)

2. Find and print the maximum sale. Print both the id of the salesperson with the max sale and the amount of the sale, e.g., "Salesperson 3 had the highest sale with $4500." Note that you don't need another loop for this; you can do it in the same loop where the values are read and the sum is computed.

3. Do the same for the minimum sale. The method to find the maximum or the minimum value of a list of values is indicated in the end.

4. After the list, sum, average, max and min have been printed, ask the user to enter a value. Then print the id of each salesperson who exceeded that amount, and the amount of their sales. Also print the total number of salespeople whose sales exceeded the value entered.

5. The salespeople are objecting to having an id of 0—no one wants that designation. Modify your program so that the ids run from 1-5 instead of 0-4. Do not modify the array—just make the information for salesperson 1 reside in array location 0, and so on.

6. Instead of always reading in 5 sales amounts, at the beginning ask the user for the number of sales people and then create an array that is just the right size. The program can then proceed as before.

```
// ********************************************************************
// Sales.java
//
// Reads in and stores sales for each of 5 salespeople. Displays
// sales entered by salesperson id
// and total sales for all salespeople.
//
// ********************************************************************

import java.util.Scanner;
public class Sales
{
   public static void main(String[] args)
   {
```

```
Scanner scan = new Scanner(System.in);

// asks the user to enter the amount of salesperson
System.out.print("Enter the amount of sales people: ");
int SALESPEOPLE = scan.nextInt();

int[] sales = new int[SALESPEOPLE];
int sum;

// Gets the input from the user for each salesperson sales
for (int i=0; i<sales.length; i++)
{
   System.out.print("Enter sales for salesperson "
                    + (i+1) +": ");
   sales[i] = scan.nextInt();
}

// Inializing min an max values and indexes
int min = sales[0];
int max = sales[0];
int maxi = 1;
int mini = 1;

// Prints each salesperson sales
System.out.println("\nSalesperson Sales");
System.out.println(" ------------------ ");
sum = 0;

// Computes and prints the total sales
for (int i=0; i<sales.length; i++)
{
   System.out.println(" " + (i+1) + " " + sales[i]);
   sum += sales[i];


   // Checks the max and min sales
   if (sales[i] > max) {
      max = sales[i];
      maxi = i+1;
   }
   if (sales [i] < min) {
      min = sales[i];
      mini = i+1;
   }
}

// Prints total, average, highest and lowest sales
System.out.println("\nTotal sales: " + sum);

double avrg = (double) sum /SALESPEOPLE;
System.out.println("\nAverage sales: " + avrg);
```

```
        System.out.println("\nSalesperson " + maxi
                        + " had the highest sale with $" + max + ".");
        System.out.println("\nSalesperson " + mini
                        + " had the lowest sale with $" + min+ ".");

        // asks the user to enter a threshold value
        System.out.print("\nEnter a minimum value for sales: ");
        int minSale = scan.nextInt();
        int minCount = 0;

        System.out.println("\nSalesperson Sales who exceeded "
                        + "the mininum sales");
        System.out.println(" ------------------ ");

        // checks which salesperson met the threshold
        // and prints their data
        for (int i = 0; i < sales.length; ++i)
        {
           if (sales[i] >= minSale) {
              System.out.println(" " + (i+1) + " " + sales[i]);
              ++minCount;
           }
        }
        System.out.println("\nAmount of sales people who exceeded "
                        + "the minimum sales: " + minCount);
    }
}
```