## **Array Practice Questions**

Think about object oriented design as you construct solutions to these problems.

## 1. What Day Is It?

Write a program that lets you enter a number from 1 to 7 and that returns the name of the day of the week. Your program should continue asking for week numbers until you enter a negative integer, at which time it stops. Use an array that you initialize with the days of the week (ie 1 = Sunday, 2 = Monday, etc).

# 2. Simple Math

Create a program that allows the user to input an array of numbers and then uses the array to determine the largest and smallest numbers as well as the sum of all the elements in the array. Create a class call arrayStats and include methods to find the max, min and sum of an integer array.

### 3. Daily Temperatures

Write a program that inputs a set of daily high temperatures from a file into an array. The first element of the file defines how many temperature data points there are in the file. Have the program output the maximum temperature, minimum temperature, the average temperature and number of times that each high was achieved. Use your arrayStats class created in Q2.

#### 4. Contact List

You need to create a program to help him keep track of all your friends. To do this you will need the following classes:

## Person Class

String firstName - The person's first name

**String lastName** – The person's last name

int Age - The age of the person

**String phoneNumber** – The person's phone number

int grade – A number between 1-4 for what grade a person is in

public Person (String firstName, String lastName, int age, String phoneNumber, int grade)

- Constructor

public void changeGrade (int grade)

- Change the person's grade
- public String getFirstName ( )
  - Returns the person's first name
- public String getLastName ( )
- Returns the person's last name public int getAge ( )
- Returns the person's age public String getPhoneNumber ( )
- Returns the person's phone number public int getGrade ( )
  - Returns the person's grade

### ContactList Class

## **Person [] contact** – An array of your friends

public contactList ();

- Creates an empty Contact List with 100 "pages" public void addPerson(String firstName, String lastName, int Age, String phoneNumber,

int grade )

- Creates a new entry in the book from the data provided public void removePerson (int personIndex)
  - Removes the person at index personIndex and moves all other Person's up one spot in the book

public void displayBook ()

- Display all information about each person in the contact list public void changeGrade (int personIndex, int newGrade)
  - Changes the grade of the person at index personIndex to newGrade

Note: You will need a third class that will interact with the user to use the Contact List through a menu system that you design.