Northeastern Illinois University
CS 200: Programming I
Professor Yehuda Gutstein
Homework

Please zip all HW files, including source files (.java) and results (.txt) for this week in ONE folder and submit on D2L.
HW is due prior to the start of the next class.

At the beginning of each .java file, please include (in comments):
//CS200
//(insert here: Semester, Year)
//Student Name
//Instructor: Y. Gutstein
//HW #x: (Name of HW)
//Due: (insert due date here)
//File name: (Insert FileName).java

HW #1: Arrays

Create a new .java file named Reverse.java.
Write a program that asks the user to enter 10 integers.
Display the numbers entered in the reverse order in which they were read in.
Your code should use an array.

Your output should match the sample output below.

```
Enter 10 integers: 3 1 90 8 37 55 28 76 101 5
The reverse is: 5 101 76 28 55 37 8 90 1 3
```

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HW #2: Arrays

Create a new .java file named Identical.java.
Write a program that asks the user to enter the length of an integer list (array).
Then prompt the user to enter the first list and then the second list.
If the two lists differ by at least one value, print out that they are not identical.
If the two lists do not differ, print out that they are identical.

Hint: You cannot determine if two arrays are the same by using array == array2. You have to compare each element of the array.

Your output should match the sample output below.

```
Enter the list length: 5
Enter list 1: 1 2 8 9 7
Enter list 2: 1 3 8 4 7
The lists are not identical.
```

```
Enter the list length: 5
Enter list 1: 1 3 8 4 7
Enter list 2: 1 3 8 4 7
The lists are identical.
```

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HW #3: Arrays

Create a .java file named DistinctNumbers.java.
Write a program that asks the user to enter 10 integers.
The program should then determine the total number of distinct (i.e. unique integers).
It should then display the distinct numbers separated by exactly one space (i.e. if a number appears multiple times, it is displayed only once).

Your output should match the sample output below.

```
Enter ten numbers: 5 1 3 8 5 9 3 7 3 1
The number of unique numbers is: 6
The distinct numbers are: 5 1 3 8 9 7
```

```
Enter ten numbers: 5 5 5 5 5 5 5 5 5 5
The number of unique numbers is: 1
The distinct numbers are: 5
```