CS-200: Programming I
Fall 2017
Northeastern Illinois University
PLTL: Week of 02/20/17
Looping/Methods

Problem #1

- Write a program that has the class name `Problem1` and that has the `main` method.

- Prompt the user to enter 10 integers and print out the largest difference and smallest difference obtained by substracting an integer from the one following it.

- Depending upon the largest and smallest difference obtained, print out the message accordingly.

- Several sample runs are provided for you below. Your output must be formatted **exactly** like the sample runs below.

```
Enter an integer: 2
Enter an integer: 8
Enter an integer: 17
Enter an integer: 25
Enter an integer: 90
Enter an integer: 45
Enter an integer: 50
Enter an integer: 32
Enter an integer: 09
Enter an integer: 64
Largest difference:65
Smallest difference:-45
```

```
Enter an integer: -5
Enter an integer: 8
Enter an integer: -37
Enter an integer: 64
Enter an integer: 2
Enter an integer: -21
Enter an integer: 0
Enter an integer: 99
Enter an integer: 41
Enter an integer: -9
Largest difference: 101
Smallest difference: -62
```

```
Enter an integer: 77
Enter an integer: 51
Enter an integer: 34
Enter an integer: 65
Enter an integer: 89
Enter an integer: 56
Enter an integer: -33
Enter an integer: -6
Enter an integer: 7
Enter an integer: 27
Largest difference: 31
Smallest difference: -89
```

Problem #2

- Write a program that has the class name `Problem2` and that has the `main` method. Leave the `main` method empty for now.

- Write a method named `allDigitsOdd` that takes one parameter, an integer `n` and returns a `boolean`.

- Determine whether every digit of the parameter `n` is odd. Your method should return `true` if the number consists entirely of odd digits and `false` if any of its digits are even. `0, 2, 4, 6 and 8` are even digits, and `1, 3, 5, 7, 9` are odd digits.

- Hint: You can pull apart a number using \10 and `% 10`.

- Several sample usages are provided for you below. Use the sample usages in the `main` method to test your code.

Sample Method Usage	Return Value
allDigitsOdd(73925)	false
allDigitsOdd(59175)	true
allDigitsOdd(530)	false
allDigitsOdd(31)	true