

Software Design I (CS 120)
Quiz 08: Monday, 20 November 2017

NAME _____

- (1) (*5 points*) The code below uses a method called `hasOdd()`. Write that method below. The method takes an array of integers as input, and returns `true` if there is odd number in the array; if the array is empty, or no odd values exist, it should return `false`. Thus, when the code below is run, we will see output as follows:

```
Array has at least one odd value: true  
Array has at least one odd value: false
```

```
int[] input = { 4, 2, 3, 4, 2 };  
boolean odd = q01.hasOdd( input );  
System.out.println( "Array has at least one odd value: " + odd );  
  
input = new int[0]; // empty array  
odd = q01.hasOdd( input );  
System.out.println( "Array has at least one odd value: " + odd );
```

(2) (10 points) The class below uses a supplier class called `ArrayWorker`. For the code to work, that supplier class must have the following methods:

- A **constructor** that takes in an integer array as input, and saves a reference to it, so that it can be used by the class methods later on.
- A method called `sumAndPrint()` that prints the words “Sum of”, followed by the contents of the array, start to end, followed by the sum of those numbers (the sum for an empty array will be 0). Array elements should appear on the same line, with a single space on each side of each number, and with brackets [...] at each end of the data. The array contents will be followed by an equals-sign and the sum of the values, and a line-break should be printed after the sum.

Thus, when the `main()` method below executes, we will see output as follows:

```
input1: Sum of [ 1 0 3 2 1 ] = 7
input2: Sum of [ -1 0 -2 1 ] = -2
input3: Sum of [ ] = 0
```

On the next page, write the code for the supplier class so that these methods will work properly.

```
public class Main
{
    public static void main( String[] args )
    {
        int[] input1 = { 1, 0, 3, 2, 1 };
        ArrayWorker worker = new ArrayWorker( input1 );
        System.out.print( "input1: " );
        worker.sumAndPrint();

        int[] input2 = { -1, 0, -2, 1 };
        worker = new ArrayWorker( input2 );
        System.out.print( "input2: " );
        worker.sumAndPrint();

        int[] input3 = {};
        worker = new ArrayWorker( input3 );
        System.out.print( "input3: " );
        worker.sumAndPrint();
    }
}
```

```
// Write the supplier class here.
```