Array exercise  Name:__________________  Checked:____

Objectives:
Practice using arrays to store and process values of different types.

a) Simple array example

```java
public class ArrayDemo {
    public static void main(String[] args) {
        int[] anArray; // declares an array of integers
        anArray = new int[10]; // allocates memory for 10 integers
        anArray[0] = 100; // initialize first element
        anArray[1] = 200; // initialize second element
        anArray[2] = 300; // etc.
        anArray[3] = 400;
        anArray[4] = 500;
        anArray[5] = 600;
        anArray[6] = 700;
        anArray[7] = 800;
        anArray[8] = 900;
        anArray[9] = 1000;
        System.out.println("Element at index 0: "+ anArray[0]);
        System.out.println("Element at index 1: "+ anArray[1]);
        System.out.println("Element at index 2: "+ anArray[2]);
        System.out.println("Element at index 3: "+ anArray[3]);
        System.out.println("Element at index 4: "+ anArray[4]);
        System.out.println("Element at index 5: "+ anArray[5]);
        System.out.println("Element at index 6: "+ anArray[6]);
        System.out.println("Element at index 7: "+ anArray[7]);
        System.out.println("Element at index 8: "+ anArray[8]);
        System.out.println("Element at index 9: "+ anArray[9]);
    }
}
```

• Type in this program, compile, and run.

• Draw a picture of the array (be sure to label the elements with their indices).

```markdown
draw your picture here:
```

• Modify the program so that it prints out the array values using a for-loop, instead of the repetitive code, above (i.e., replace the block of printing statements marked “A”).

• Modify the program so that it also initializes the array values using a for-loop, i.e., replace the block of assignment statements marked “B”.

**NOTE:** Be sure you have two separate loops, do not combine B with A.

• What happens if you do not initialize the array’s values? Comment out the initialization loop that sets the values to 100, 200, etc. and see what happens. Do you get an error?

Answer: ____________________________________________________________

CSC 1051 Data Structures and Algorithms I  Dr. Papalaskari