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**Introduction**

In order to print characters instead of numbers, I made changes to the following three classes:

1. In the **ArrayWriter** class, I changed the data type of the *startValue* variable from an int to a char (line 6). This also required casting the *startValue* variable into an int (line 14) and the *i* argument into a char (line 15).
2. In the **SimpleArray** class, I changed the data type of the array (lines 6 and 11) variable and the *value* argument (line 14) from int to char. The *printf* call on line 22 was also changed to reflect the aforementioned data type change.
3. In the **SharedArrayTest** class, I changed the first arguments to the constructor calls on lines 9 and 10 to alphabetical letters.

This solution depends on the ability to increment a character value in the same way as an integer. This is possible in Java because the char data type is based on a Unicode specification, which has an integer value (Oracle, 2013). So on line 14 of the ArrayWriter class, the character is cast into its integer value, incremented, then cast into a char again before it is saved into the array.

The difference between Figure 26.8 and Figure 26.5 is that the *add* method is a synchronised method in Figure 26.5, as indicated by the use of the *synchronized* keyword in the method declaration (Oracle, 2013). Deitel and Deitel advise the use of synchronized methods to control access by multiple threads to the same mutable data (2012, p.1060). Only one thread at a time can execute such a method, preventing another thread from accessing old data (p.1062).

REFERENCES

Deitel, P.; Deitel, H. (2012), ‘*Java: How to Program*’ 9th ed., Pearson.

Oracle Corporation (2013), ‘*Character*’ [Online], available at <http://docs.oracle.com/javase/7/docs/api/java/lang/Character.html>. Accessed on 16 August 2013.

Oracle Corporation (2013), ‘*Synchronized Methods*’ [Online], available at <http://docs.oracle.com/javase/tutorial/essential/concurrency/syncmeth.html>. Accessed on 16 August 2013.