Coding Test

You have 2 hours to complete the following **three** problems. Complete as much as you can. You are not allowed to use the Internet or a cell phone during the test with the exception of referencing the Java API.

Problem 1

Write an application that can convert a product ID number to a standard ISBN-10 number.

If we take the Da Vinci Code as an example, the product ID is 978140007917 and the ISBN is 1400079179. The first 3 digits of the product ID (978) are a prefix that can be removed. The remaining digits of the product ID (140007917) are the digits of the ISBN excluding the error control digit. Refer to **Appendix 1** for a description of how an ISBN number is constructed.

Your task is to develop an application that can accept a Product ID number and generate the ISBN-10 number.

You can code this up as a console application that takes in Product ID as input then outputs the ISBN.

Sample Test cases:

ProductID	**ISBN**
978155192370	155192370x
978140007917	1400079179
978037541457	0375414576
978037428158	0374281580

Problem 2

Given an array of arbitrary length that is fully populated with randomly distributed int values: 1, 2, and 3, write the most efficient algorithm you can think of that sorts the array into ascending int order. Do not use sorting methods in the API. You do not need to write a GUI for this problem.

Problem 3 on next page…

Problem 3

Given **SchoolAttendees.java**, improve the code and logic as you see fit. The user experience must not be changed in any way (unless you have a very strong reason to do so. In this case, document your reasoning in a comment).

Assumptions:

1. The format of the input file will never change
2. All input text and user input contain only ASCII compatible characters

Note: Pay attention to time constraints. It might be tempting to do a major or full rewrite, but please ensure you have enough time to complete a runnable app.