1. Do Problem 7.18.
   If the user enters

   ```
   0d
   ```

   the output to the console should be

   ```
   0d is valid: 13
   ```

   If the user enters

   ```
   1D8G
   ```

   the output to the console should be

   ```
   1D8G is not valid.
   ```

   To guarantee that the hexadecimal value does not occupy more than two bytes, check that the *decimal* value is not more than 65535. Note that 00000A is a valid hexadecimal constant even though it is longer than four characters.

   You are not allowed to use the Java method `parseInt()` as the purpose of the program is to implement a parser yourself.

   Name your Java package `prob0718`. Note the lowercase `p`. The first line of your source file must be `package prob0718;`. Name your IntelliJ project `Prob0718` and the class that has the main program as `Prob0718Main`. For your convenience, here is an IntelliJ project set up according to the above specifications for you to modify.

   https://www.cslab.pepperdine.edu/warford/cosc330/Prob0718.zip

   Export the source file in a JAR file named `Prob0718.jar`. Hand in the `.jar` file electronically per the instructions for your course.