1. Do Problem 7.19(a).

   Note that the problem description continues on page 462.

   You must store `hexValue` as an integer as in the previous programming assignment.

   Your lexical analyzer should recognize all the valid tokens and reject all the invalid tokens. The list of valid tokens in the problem description is not exhaustive. There are many more strings of characters that should be accepted.

   Here is a list of invalid tokens that your lexical analyzer should handle properly.

   Tokenizer input

```
alpha$beta
0xQ
0x12345
-32769
65536
<empty line>
```

   Tokenizer output

```
Identifier = alpha
Syntax error
Syntax error
Syntax error
Syntax error
Syntax error
Empty token
```

   There are many other strings of characters that should not be accepted. No string of input characters should crash your program.

   Restriction: For all phases of this project you may not use any Java library functions that parse strings, for example `Integer.parseInt()`. That would defeat the purpose of the program, which is to parse the source.

   Name your Java package `prob0719`. Note the lowercase `p`. Create a separate source file for each Java class. See this link for instructions on how to create a new class with IntelliJ.

   Name your IntelliJ project `Prob0719` and the class that has the main program as `Prob0719Main` in a file named `Prob0719Main.java`. For your convenience, here is a IntelliJ project set up according to the above specifications for you to modify.

   https://cslab.pepperdine.edu/warford/cosc330/Prob0719.zip

   Export the source file in a JAR file named `Prob0719.jar`. Hand in the `.jar` file electronically per the instructions for your course.