**Homework 1**

Write a function product(s : String) that computes the product of the Unicode codes of all letters in a string. For example, the product of the characters in "Hello" is 9415087488L. **(1)**

Write a Scala equivalent for the Java loop   
for (int i = 10; i >= 0; i--) System.out.println(i); **(2)**

Using BigInt, compute 21024. **(3)**

Write a function countdown(n: Int) that prints the numbers from n to 0 **(4)**

One way to create random ﬁle or directory names is to produce a random BigInt and convert it to base 36, yielding a string such as "qsnvbevtomcj38o06kul". Poke around Scaladoc to ﬁnd a way of doing this in Scala. **(5)**

The signum of a number is 1 if the number is positive, –1 if it is negative, and 0 if it is zero. Write a function that computes this value. **(6)**