Problem 1 | **72 Points**

Million Monkey Mayhem

Program Name: monkey.java **Input File: monkey.in**

We've all heard the expression that "Given enough time, a million monkeys typing on a million typewriters would eventually produce the works of Shakespeare" (which severely underestimates the magnitude of the problem). But let's assume we have semi-literate monkeys and we only wish them to type a short sentence. We'll use a pseudorandom number generator to simulate a monkey banging away on a typewriter.

Java conveniently supplies a pseudorandom number generator using the Random class. The only problem is that we need to randomly generate characters while the Random class generates signed integers. Use the following formula to map a signed integer, *s*, to a printable ASCII character value:

$$ASCII\ Value = (| s | \bmod 26) + 97$$

This will generate an ASCII value in the range [97,122] which represents a lower-case letter. If we generate 10 random integers (using the nextInt() method) we can use the above formula to produce a pseudorandom string of ten letters.

Input
The first line of input will contain a single integer *n* indicating the number of data sets. Each data set will consist of a single line containing an integer that is the seed value to use for the pseudorandom number generator.

Output
The output for each data set will be the string of ten characters produced by the pseudorandom number generator along with the formula given above.

Example Input File
```
4
262
82
1
8836
```

Example Output To Screen
```
sctozzonyj
copdbmfmza
napsywpddc
rfzkxwthee
```