CMPS 148 Homework 1

Calculate the first N *emirp* (prime, spelled backwards) numbers, where N is a positive number that the user provides as input. An Emirp is a prime number whose reversal is also a prime. For example, 17 is a prime and 71 is a prime, so 17 and 71 are emirps. Write a program that prints out the first N emirps, five on each line.

For example:

```
Please enter a positive number:  25
2       3       5       7       11
13      17      31      37      71
73      79      97      101     107
113     131     149     151     157
167     179     181     191     199
```

For this assignment, you are **required** to make use of 2 functions (which you must write).

```
bool isPrime(int value);
```
// Returns true if value is a prime number.

```
int reverse (int value);
```
// Returns the reverse of the value (i.e. if value is 35, returns 53).

You should follow a top-down design, using these functions in conjunction with logic in main, to perform the computation of N emirps and print them out according to the screenshot above. The general outline for main would be as follows:

Step 1: Ask user for positive number (input validation)

Step 2: Initialize a variable **Test** to 2

Step 3: While # emirps found is less than the input:

Call **isPrime** with **Test**, and call it again with **reverse**(Test). If both are prime, print and increment number of emirps found.

Test++