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:

![Image](image_url)

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

```cpp
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++`