

Problem 1

Create a Fortran program containing a PrimeNumber module. Your PrimeNumber module will contain three functions:

1. `GetNextPrime(start_val)`: returns the next prime number after `start_val`.
2. `GetPreviousPrime(start_val)`: returns the next prime number before `start_val`.
3. `IsPrime(number)`: returns a logical stating whether the number is prime (`.true.`) or not prime (`.false.`).

Inside your main program:

1. Starting with 101, call `GetPreviousPrime()` and output the previous prime number; continually call this method and print the result until you reach the number 2.
2. Starting with 2, call `GetNextPrime()` and print the output; continually call this method and output the result until you reach the number 101.

Note: This will place you a *bit* closer to finishing the Fortran project.