

CS302 Loops

The goal of this exercise is to work with conditions as well as branching and looping statements.

1.) Prime Numbers

Write a class method named `isPrime` that is passed an integer and returns true if that integer is prime.

2.) Break the Code

Consider the following class:

```
class Lock {  
    private long combination;  
  
    // Constructor randomly determines a combination (long integer)  
    public Lock (long length) { ... }  
  
    // returns the number of digits in the combination  
    public long getLength () { ... }  
  
    // digit:    a single digit, 0 to 9  
    // position: the digit's position in the combination, 1 to length-of-combination  
    // returns true if the digit is correct for position specified  
    public boolean checkDigit (int digit, long position) { ... }  
}
```

Write a code fragment that determines and displays the combination of `lock`.

```
InputBox    in = ... // assume it is properly constructed  
OutputBox  out = ... // assume it is properly constructed  
Lock        lock = new Lock(in.getLong("enter the length of the lock"));
```