

Close Lab 3: Create and use a class: myInteger**Problem Description:**

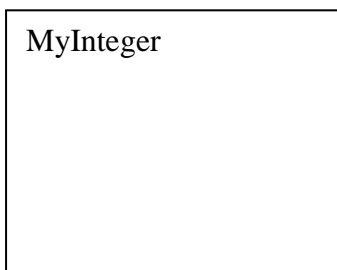
Design a class named MyInteger. The class contains:

- An int data field named value that stores the int value represented by this object.
- A constructor that creates a MyInteger object for the specified int value.
- A get method that returns the int value.
- Methods isEven(), isOdd(), and isPrime() that return true if the value is even, odd, or prime, respectively.
- Static methods isEven(int), isOdd(int), and isPrime(int) that return true if the specified value is even, odd, or prime, respectively.
- Static methods isEven(MyInteger), isOdd(MyInteger), and isPrime(MyInteger) that return true if the specified value is even, odd, or prime, respectively.
- Methods equals(int) and equals(MyInteger) that return true if the value in the object is equal to the specified value.
- A static method parseInt(char[]) that converts an array of numeric characters to an int value.
- A static method parseInt(String) that converts a string into an int value.

Draw the UML diagram for the class. Implement the class.
Write a client program that tests all methods in the class.

Design:

Draw the UML class diagram here

**Coding: (main testing part provided)**

```
public class Exercise10_03 {
    public static void main(String[] args) {
        MyInteger n1 = new MyInteger(5);
        System.out.println("n1 is even? " + n1.isEven());
        System.out.println("n1 is prime? " + n1.isPrime());
        System.out.println("15 is prime? " + MyInteger.isPrime(15));
    }
}
```

```
char[] chars = {'3', '5', '3', '9'};
System.out.println(MyInteger.parseInt(chars));

String s = "3539";
System.out.println(MyInteger.parseInt(s));

MyInteger n2 = new MyInteger(24);
System.out.println("n2 is odd? " + n2.isOdd());
System.out.println("45 is odd? " + MyInteger.isOdd(45));
System.out.println("n1 is equal to n2? " + n1.equals(n2));
System.out.println("n1 is equal to 5? " + n1.equals(5));
}
}

class MyInteger {
    // Implement your class here
}
```

Submission:

Follow our class coding standard to complete this lab, check out for credit.

