

North South University

Department of Electrical and Computer Engineering

CSE 215L: Programming Language II Lab

Lab – 6 Topic(s): Classes & Objects (Introduction + Encapsulation)

Lab Task:

1. Implement the following class and test its methods:

Fraction
- numerator: int - denominator: int
+ Fraction(numerator: int, denominator: int) + getNumerator(): int + getDenominator(): int + setNumerator(numerator: int): void + setDenominator(denominator: int): void + toString(): String + add(fraction: Fraction): void + sub(fraction: Fraction): void + multiplication(fraction: Fraction): void + division(fraction: Fraction): void

```
void add(Fraction fraction)
```

Adds two Fraction objects and stores the result into the calling object. This is how addition is performed for fractions:

$$1/4 + 3/5 = 1*5 + 3*4 / 4*5 = 17/20$$

```
String toString()
```

Returns the value of the fraction in 1 / 2 format where 1 is numerator and 2 is denominator.

Now write a test program that performs the following steps:

- ☐ Take two Fraction objects and print both of them.
- ☐ Test add, sub, multiplication and division methods.
- ☐ Print calling object after each method call.