

**WXES1116 Programming I**  
**Semester 1 2014/2015**  
**Lab 7: Class I**

1. Define a class name Number. The class is used to handle an integer array. The class Number will display all the item of the array, the even number, the prime number, the maximum number, the minimum number, the average, the square number. Create a Tester class to test the program.

Number a = new Number() // generate 10 random integers within 0 to 100.  
Number b = new Number(5) // generate 5 random integers within 0 to 100.  
Number c = new Number(4, 50) // generate 4 random integers within 0 to 50.

2. Define a class name BankAccount. The class allows the customer to open the saving account with their name, IC or passport number and the deposit amount. The class consists of deposit method and withdraws method. Besides, the class can display the current balance. Create a Tester class to test the program.
3. Define a class name WeightCalculator. The class has an input method that accepts the user's age and height. Besides, the class consists a method that calculating the recommend weight with this formula

$$\text{recommend weight} = (\text{height} - 100 + \text{age} / 10) * 0.9$$

The class will display the user's age, height and the recommend weight. Create a Tester class to test the program.

4. Define a class Fraction. The class has an input method that accepts the numerator and the denominator from the user. Use the mutator method to set the numerator and denominator and the accessor method to get the value of numerator and denominator. This class also has a method to display the fraction reduced to lowest terms. (find the greatest common divisor for the numerator and denominator. Create a Tester class to test the program.
5. Define a class Game. The class has a constructor that accept player name. Besides, the class contains a method move that roll the dice. Create a Tester class to test the program with two players and the player that reach 100 or more win the game.