# Lab 3: Chapter 3, “Using Classes and Objects”

The following exercises are intended to help you apply and practise the concepts introduced in this module. This work is **not** submitted for marks. The questions are from the end of the chapter in your text under the “Exercises” or “Programming Projects” headings.

Try to answer the questions on paper first. Then insert the answers in a Java program to see the actual result. There is a brief video demonstration for questions 1, 2, and 3, <https://barabus.tru.ca/comp1131/module3_lab3.html>.

1. Write a statement that prints the number of characters in a String object called overview.

System.out.println(“# of char: “ + overview.length());

1. Write a statement that prints the eighth character of a String object called introduction.

System.out.println(“8th char: “ + introduction.subString(7,9); *Works, but .charAt(7) is a better solution*

1. What output is produced by the following code fragment?

String m1, m2, m3;  
m1 = "Quest for the Holy Grail";  
m2 = m1.toLowerCase();  
m3 = m1 + " " + m2;  
System.out.println ( m3.replace('h', 'z'));

M2 = quest for the holy grail

M3 = Quest for the Holy Grail quest for the holy grail

Quest for tze zoly Grail quest for tze zoly grail

1. Assuming that a Random object has been created called generator, what is the range of the result of each of the following expressions?
2. generator.nextInt(20)

0-19

1. generator.nextInt(8) + 1

1-8

1. generator.nextInt(45) + 10

10-54

1. generator.nextInt(100) – 50

-50 to 49

1. Write an assignment statement that computes the square root of the sum of num1 and num2 and assigns the result to num3.

num3 = Math.sqrt(num1 + num2);

1. Write a single statement that computes and prints the absolute value of total.

System.out.println(Math.abs(total));

1. Write code statements to create a DecimalFormat object that will round a formatted value to four decimal places. Then write a statement that uses that object to print the value of the result, properly formatted.

DecimalFormat fmtD4 = new DecimalFormat(0.####);

System.out.printlin(fmtD4.format(value));

1. Write a declaration for an enumerated type that represents the days of the week.

enum WorkDays = [“Mon”, “Tues”, “Weds”, “Thurs”, “Fri”]; *not strings*

*=[mon,tues,weds,thurs,fri]*

Review your work by viewing the solution sheet.