Week 3 – Workshop

Make a new project in Eclipse (File --> New --> Project --> Java --> Java Project, or, once you have done it once, just File --> New --> Java Project). But feel free to copy any code from the basic-syntax project, which is the source code from the lectures. Reminder: to copy code from one project to another, go to the first project, expand "default package", R-click on the Java class of interest, choose "Copy", go to the new project, R-click on the project, and choose "Paste".

Fundamental Programming Structures in Java

Exercises: 1:

- Write a program to take an input number from user between 1 and 24. Use if statement and case statement to display the output. If the input is less than 18, print a "Good day" greeting, otherwise print"Good evening".

- Write a while loop that prints out multiples of 5 between 10 and 95

- Write a while loop to add up the values 1 to 10 and print the sum once the loop has finished

Exercises: 2: Write a program that prompts the user to input three numbers. The program should then output the numbers in non-descending order.

Exercises: 3: Write a program that prompts the user to input an integer between 0 and 35. If the number is less than or equal to 9, the program should output the number; otherwise, it should output A for 10, B for 11, C for 12, ... , and z for 35. (Hint: Use the cast operator, (char) ( ), for numbers>= 10. For uppercase characters A=55, B=56 etc)

Exercise 4: Make a program that flips a coin 10 times, saying "heads" or "tails" each time. Recall that Math.random() returns a double between 0 and 1.

Exercise 5: Write a program that reads a set of integers, and then finds and prints the sum of the even and odd integers. (Hint use the modulo operator %).

Exercises 6: You have several pictures of different sizes that you would like to frame. A local picture framing store offers two types of frames-regular and fancy. The frames are available in white and can be ordered in any color the customer desires. Suppose that each frame is 1 inch wide. The cost of coloring the frame is $0.10 per inch. The cost of a regular frame is $0.15 per inch and the cost of a fancy frame is $0.25 per inch. The customer can also choose to put crowns on the corners, which costs $0.35 per crown. Write a program that prompts the user to input the following information and then output the cost of framing the picture:

a. The length and width, in inches, of the picture.

Questions- Chapter 4- Malik D.A. Java Programming :From Program Analysis to Program Design 5th Edition, Course Technology, 2012.

b. The type of the frame.

c. Customer's choice of color to color the frame.

d. If the user wants to add the crowns, then the number of crowns.

Exercises 7: Write a program that uses while loops to perform the following steps:

a. Prompt the user to input 'two integers: firstNum and secondNum. (firstNum must be less than secondNum.)

b. Output all the odd numbers between firstNum and secondNum inclusive.

c. Output the sum of all the even numbers between firstNum and second.Num inclusive.

d. Output all the numbers and their squares between 1 and 10.

e. Output the sum of the squares of all the odd numbers between firstNum and second.Num inclusive.

f. Output all the uppercase letters.