953231 Object Oriented Programming

2nd semester 2021

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Sec (Lab)\_\_\_\_\_\_\_\_\_\_\_\_

**Lab 1: Java Review I**

**Objectives**

* To review Java knowledge about
  + Receive and display message to standard output
  + Decision statement
  + Repetition
    - while loop
    - do-while loop
    - for loop
    - nested loop

1. Decision statements
   1. If statement

Write a Java program to accept integer value from keyboard. This program have to display message “Your value is too low.”, if the entered value is less than 500. Otherwise, this program display message “Your value is high enough.” Then write your program in answer sheet.

* 1. Nested if statement

Write a Java program to create vending machine menu. User selects menu by enter number 1 to 5 from keyboard. The program should have prompt message.

Welcome to OOP Lab

1. menu 1

2. menu 2

3. menu 3

4. menu 4

5. Bye Bye

If user put 1, the program will display message “Welcome to menu 1.” If user put 2, the program will display message “Welcome to menu 2.” If user put 3, the program will display message “Welcome to menu 3.” If user put 4, the program will display message “Welcome to menu 4.” If user put 5, the program will display message “Bye bye, see you tomorrow.”. You have to implement this program by using nested if statement. Then write your program in answer sheet.

1. Repetition

Write Java program to solve following problem and display the results. Choose the loop that you fell is most natural: for, while, or do-while.

* 1. On April 1, Anakin deposits one baht in her bank. As an April Fool’s Day resolution. Anakin decides to double the previous day’s amount each day for one month. So, on April 2, Anakin saves two bahts; on April 3, 4 bahts, and so on. How much will Anakin have saved by April 30?
  2. On April 1, Vader deposits one baht in her bank. Each day she doubles the amount from the previous day. When will Vader have saved 1,000,000 bahts? (Calculate number of day after April 1)

1. Nested loop

Write a Java program to generate a multiplication table such as the following “9 times table”;

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2 | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 |
|  | … |  |  |  |  |  |  |  |  |  |
| 9 | 0 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 |