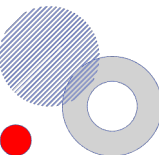
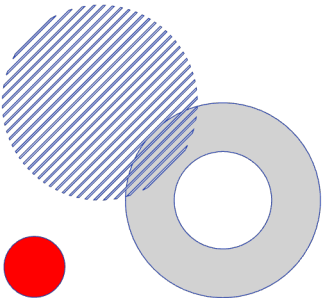
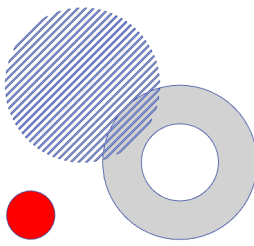




CSS232 Object-Oriented Programming

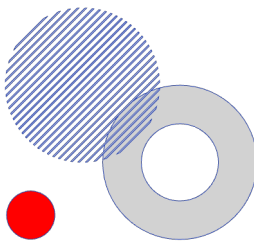
Lecturer: Dr. Thittaporn Ganokratanaa





Lab

- Lab Unit 1
- Lab Unit 2
- Lab Unit 3



Lab Unit 1

1. Write a program to display any message

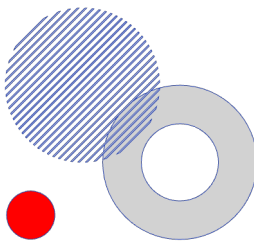
Example: display a sentence: **“Welcome to OOP Programming”**

2. Write a Java program to display default value of all primitive data types of Java.

Note: the data types that need to show their default value are: **short, int, long, float, double, char String, and Boolean.**

3. Write a program check two strings are equal or not.

Example: **str1 = “OOP”; str2 = “Object-Oriented Programming”**



Lab Unit 2

1. Write a program to give the examples of operators.

i. Increment and decrement operators.

Hint: **`+x; ++x; x++`**

ii. Arithmetic operator.

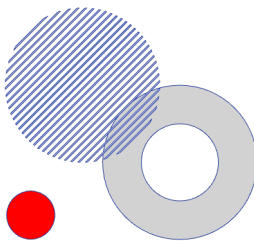
Hint: **`+, -, *, / , %`**

iii. Relational Operator.

Hint: **`< , > , <= , >= , == , !=`**

iv. Conditional Operator.

Hint: **`x = boolean ? a : b;`**



Lab Unit 2

2. Write a program to give the example of control statements.

i. If statements.

Guide: **Testing on two integer and print the greatest and the lesser.**

ii. Switch Statements.

Guide: **Initial a char, then apply switch with three case and display the output.**

iii. For loop.

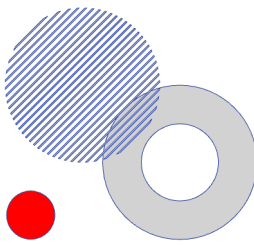
Guide: **Display total sum value of a = 10**

iv. While Statements

Guide: **Apply “while” loop in the condition $i \leq 5$, and display the $i+1$ of every iterations**

v. Do statements

Guide: **Apply “do” with a display sentence, and then break the loop if $i > 5$**



Lab Unit 2 (Cont.)

3. Write a program to calculate the following

i. Find the length of array

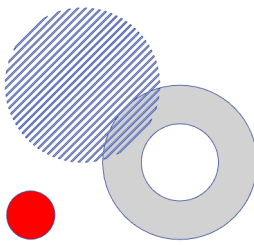
Example: **a1 = int[10]; a2 = { 3,5,7, 1, 8, 99 , 44, -10 }; a3 = {4,3,2,1};**

ii. Demonstrate a two-dimensional array

Guide: **create 3x3 matrix that has element's value from 0 to 8**

4. Write a program to arrange the numbers in ascending order.

Example: **arr = {234,6,846,85,96,198,545,12,60,34,4,87,7,1};**



Lab Unit 2 (Cont.)

5. Write a program for calculating Matrix Operations

i. Addition

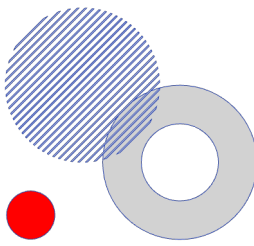
$a = \{ \{4,7,9,8,3\}, \{2,4,7,8,1\}, \{1,1,8,1,2\}, \{0,0,1,0,4\} \};$

$b = \{ \{1,2,8,4,3\}, \{4,1,8,3,1\}, \{2,1,0,0,5\}, \{1,2,1,1,7\} \};$

ii. Multiplication

$a = \{ \{1,2,3\}, \{4,5,6\}, \{2,3,4\} \};$

$b = \{ \{1,2,3\}, \{4,5,6\}, \{2,3,4\} \};$



Lab Unit 3

1. Write a program to reads Celsius in double value from the console and converts it to Fahrenheit. (**Note: Fahrenheit = (9.0/5.0)*Celsius + 32**)

Q&A

