CHARUSAT
CSPIT
Department of Information Technology

Subject Name: Java Programming **Semester :** III
Subject Code: IT242 **Academic year:** 2017/2018

Practical List

Week – 1 **Basics of Java Programming**	
1	Write a simple Java program which covers all the supported operators like Arithmetic, logical or bitwise using the concept of switch statement.
2	Write a Java Program to calculate simple interest
3	Write a Java Program to convert given number into characters. **ex:**(i/p: 1….o/p: one
4	Write a Java Program to print whether the given number is Armstrong or not.

Week – 2 **Object, Method & Constructor Overloading**	
1	Demonstrate the use of public, private and protected specifier with suitable example. List down the cases where public, private or protected variables are not accessible.
2	Write a Java Program to demonstrate the Method Overloading with different numbers of parameters in argument list.
3	Write a Java Program to demonstrate the Method Overloading with difference in datatypes of parameters.
4	Write a Java Program to demonstrate the Method Overloading by changing the sequence of datatypes of arguments.
5	Similarly perform above three programs with the concept of constructor overloading.
Week – 3 **Command Line Argument & String Class Methods**	
1	Write a program in Java to demonstrate at least 10 string class methods with proper output.
2	Write a program in Java to arrange the numbers in ascending order. (User needs to supply

	five numbers through command line).
	Write a program in Java to find total available prime numbers between the given ranges. (Range should be given in command line.)

Week – 4 Inheritance	
1	Demonstrate the use of single level inheritance by taking proper class and sub class along with variables. Create the object of both the class and try to identify valid and invalid cases in terms of method calling.
2	Write a Java program to facilitate the multilevel inheritance. (Also demonstrate the use of constructor in multilevel inheritance.
3	Demonstrate the use of super keyword in inheritance and try to implement the program which can able to perform following operations… a. Use super to call base class variable. b. Use super to call base class method. c. Use super to call base class constructor.
4	Write a Java Program to demonstrate the concept of hierarchical inheritance. (implement this program with super keyword, final keyword, constructor and method overriding concept)

Week – 5 Interface and Abstract Class	
1	Write a java program to demonstrate dynamic method dispatch and abstract keyword with class and methods.
2	Try to implement the concept of multiple inheritance in Java with the use of interface.
3	Write a Java program to demonstrate the hybrid inheritance with example.

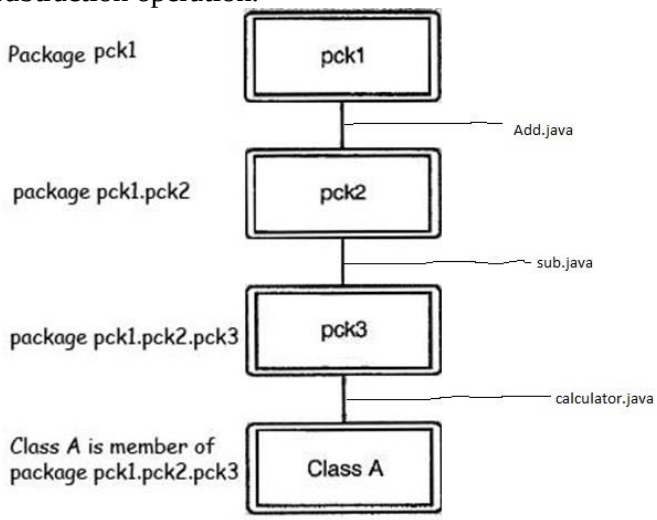
Week – 6
Package

1 Write a program that demonstrates use of packages & import statements. (Simple addition program).

2 Write java program to check all the available access specifier with package and try to prove that the below given table is true.

Location	Private	No modifier	Protected	Public
Same class	Yes	Yes	Yes	Yes
Same package and also a subclass	No	Yes	Yes	Yes
Same package but not a subclass	No	Yes	Yes	Yes
Different package but a subclass	No	No	Yes	Yes
Different package but not a subclass	No	No	No	Yes

3 Write a java program to create the hierarchy like below figure to perform addition and subtraction operation.



	Week – 7 **Exception Handling**
1	Write a different java program for generating following types of exception a. NullPointerException b. ArrayIndexOutOfBoundException c. ArithmeticException d. NumberFormatException e. StringIndexOutOfBoundException
2	Write a program to demonstrate user define exception.
3	Write a java program to demonstrate the use of nested try block.
4	Can a method be overloaded on the basis of an exception? Explain with an example.

	Week – 8 & 9 **Multithreading**
1	Write a program for creating three threads randomly using following methods: a. By extending Thread class b. By implementing Runnable interface
2	Write a thread program to demonstrate isAlive () and join ().
3	Write a program to create a new thread by extending a thread class. a. Get the current thread name b. Set the highest priority to the newly created thread c. Pause a thread for 2.5 seconds. d. Check whether the thread is in running state or not.

	e. Verify your newly created thread must be completed first before your main thread is completed.
4	Write a Java program to create deadlock type situation using multiple threads. Also provide solution to come out from the deadlock.
5	Write a Java Program to implement the concept of inter thread communication with very famous producer consumer problem

Week – 10 & 11 Applet and Event Handling	
1	Write a program to create an applet having width 300 pixels and height is 100 pixels. Display "Hello world" message into applet screen using applet life cycle methods.
2	WAP to create the different component (like button, labels, checkbox etc), container, panel with appropriate example.
3	WAP that demonstrate use of graphics class in applet like drawing line, rectangle, ellipses, circle etc.
4	WAP to show the concept of layout managers.
5	Write a program to display mouse pointer position in status bar of applet screen when mouse left click is occurred. When mouse enter in to area of applet screen, background color of applet should change with Blue color. And when mouse exit from applet screen it should set to default background color (white). If click is right click then appropriate message should display into status bar of applet.
6	Provide radio buttons in the frame. The text in the TextField should display the label of the selected radio buttons. Write a program that displays the text with user defined font in a TextField.
7	Write a program to implement the 'MouseListener' interface. Implement the five methods defined by the interface.
8	Write a program using mouse adapter classes and handle only two mouse events. For

	example, ‘mouse click’ and ‘mouse drag’ events.
9	Create an applet with a menu bar consisting of menus ‘File’, ‘Edit’ and ‘Help’. The menu ‘File’ should have menu items such as ‘New’, ‘Open’, ‘Save’ and ‘Exit’. The menu ‘Edit’ should have menu items such as ‘Cut’, ‘Copy’ and ‘Paste’. The menu items ‘Find’ of ‘Help’ should have a sub menu having items ‘Search by Name’ and ‘Search by Extension’. Include a pop-up menu also with items ‘Open’ and ‘Save’.

Week 12 **Lambda Expression**	
1	Write a Java program to demonstrate the concept of lambda expression with a. No parameter b. Single parameter c. Multiple parameter d. foreach loop
2	Write a Java program which clearly mentioned the difference between anonymous inner class and lambda expression.