

Course Code	Course Title	L	T	P	C
OLMDS604	Programming in Java	3	1	0	4
Pre-requisite	NIL	Syllabus version			
		1.0			
Course Objectives					
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Basics of Networking in Java- Understanding IP, TCP, UDP, and Sockets- Building a Simple Client-Server Application-Basics and Architecture of RMI-Understanding Stubs and Skeletons-Building a Simple RMI Application		
	Total Lecture hours:	120 hours
Text Book(s)		
1.	Herbert Schildt, The Complete Reference-Java, Tata Mcgraw-Hill Edition, ISBN: 978-0-07-180855-2, 12th Edition, 2019.	
Reference Books		
1.	Bruce Eckel, Thinking in Java, Prentice Hall Edition, ISBN: 978-0131872486, 5th Edition, 2019.	
2.	Paul J. Deitel and Harvey Deitel, Java How to Program, Early Objects, Pearson Edition, ISBN: 978-0134743356, 11th Edition, 2017.	
3.	Jonathan McArthur, Java Frameworks Unleashed: Best Practices in Modern Java Development, Galaxy Tech International Edition, ISBN: 978-0-98765-432-1, 3rd Edition, 2021.	
Mode of Evaluation: CAT / written assignment / Quiz / FAT		
List of Tutorials (Indicative)		
1. Use eclipse or Netbean platform and acquaint with the various menus, create a test project, add a test class and run it see how you can use auto suggestions, auto fill. Try code formatter and code refactoring like renaming variables, methods and classes. Try debug step by step with a small program of about 10 to 15 lines which contains at least one if else condition and a for loop.		
2. Write a Java program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the +, -, *, % operations. Add a text field to display the result. Handle any possible exceptions like divide by zero.		
3. a) Develop an applet that displays a simple message. b) Develop an Applet that receives an integer in one text field & compute its factorial value & returns it in another text filed when the button "Compute" is clicked		
4. Write a java program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw a Number Format Exception. If Num2 were Zero, the program would throw an Arithmetic Exception Display the exception in a message dialog box.		
5. Write a java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.		
6. Write a java program that connects to a database using JDBC and does add, delete, modify and retrieve operations.		
7. Write a java program that simulates a traffic light. The program lets the user select one of three lights: red, yellow, or green with radio buttons. On selecting a button, an appropriate message with "stop" or "ready" or "go" should appear above the buttons in a selected color. Initially there is no message shown.		
8. Write a java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class		

Shape. Each one of the classes contain only the method printArea() that prints the area of the given shape.			
9. Suppose that a table named Table.txt is stored in a text file. The first line in the file header and the remaining lines correspond to row in the table. The elements are separated by commas. Write a Java program to display the table using labels in grid layout.			
10. Write a Java program that handles all mouse events and shows the event name at the center of the window when a mouse event is fired. (Use adapter classes).			
11. Write a java program that loads names and phone numbers from a text file where the data is organized as one line per record and each field in a record are separated by a tab (\t). It takes a name or phone number as input and prints the corresponding other value from the hash table(hint: use hash tables)			
12. Implement the above program with database instead of a text file.			
Recommended by Board of Studies		16-10-2023	
Approved by Academic Council		No. 72	Date 13-12-2023