Programming with JAVA

Course Code	20SO8454	**Year**	II	**Semester**	II
Course Category	SOC	**Branch**	CSE	**Course Type**	Practical
Credits	2	**L-T-P**	1-0-2	**Prerequisites**	Programming for Problem Solving,
Continuous Internal Evaluation :	-	**Semester End Evaluation:**	50	**Total Marks:**	50

Course Outcomes		
Upon successful completion of the course, the student will be able to		
CO1	Apply object oriented principles/ Java constructs for solving problems	**L3**
CO2	Implement programs as an individual on different IDE/ online platforms.	**L3**
CO3	Develop an effective report based on various programs implemented.	**L3**
CO4	Apply technical knowledge for a given problem and express with an effective oral communication.	**L3**
CO5	Analyze outputs using given constraints/test cases.	**L4**

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
CO1		2											2	
CO2					2				2					
CO3										3				
CO4									2		2			
CO5			1			1								

Syllabus		
Expt No.	**Contents**	**Mapped CO**
1	Implement the concept of instantiation of objects using classes.	**CO1,CO2,CO3,CO4,CO5**
2	Use String and String Tokenizer classes to develop Java programs.	**CO1,CO2,CO3,CO4,CO5**
3	Implement reusability concept through inheritance.	**CO1,CO2,CO3,CO4,CO5**
4	Implement concept of Polymorphism using method overloading and overriding.	**CO1,CO2,CO3,CO4,CO5**
5	Develop Java programs using Abstract Class to achieve partial abstraction.	**CO1,CO2,CO3,CO4,CO5**
6	Use interfaces to develop Java programs with complete abstraction.	**CO1,CO2,CO3,CO4,CO5**
7	Create a package and access members from the package to avoid naming conflicts.	**CO1,CO2,CO3,CO4,CO5**
8	Implement Exception handling to build robust programs.	**CO1,CO2,CO3,CO4,CO5**
9	Develop Java programs using Multithreading for process synchronization.	**CO1,CO2,CO3,CO4,CO5**
10	Implement various data structures using Collection Framework.	**CO1,CO2,CO3,CO4,CO5**

Case Study: Apply object oriented concepts to build an application.

Learning Resources

Text Books

1. Java - The Complete Reference, Herbert Schildt, Ninth Edition, 2014, McGraw-Hill.

e-Resources & other digital material

1. http://www.learnjavaonline.org/
2. http://vtc.internshala.com/signup/course_details2.php?course=java101
3. https://nptel.ac.in/courses/106/105/106105191/
4. https://www.udemy.com/course/java-tutorial/
5. https://www.decodejava.com/
6. https://www.codecademy.com/learn/learn-java
7. https://www.w3schools.com/java/