PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY, KANURU, VIJAYAWADA
(AUTONOMOUS)
INFORMATION TECHNOLOGY

PROGRAMMING WITH JAVA LAB

Course Code	20IT3453	**Year**	II	**Semester**	II
Course Category	PC Lab	**Branch**	IT	**Course Type**	Practical
Credits	1.5	**L-T-P**	0-0-3	**Prerequisites**	C Language
Continuous Internal Evaluation	15	**Semester End Evaluation**	35	**Total Marks**	50

Course Outcomes		**Blooms Levels**
Upon Successful completion of course, the student will be able to		
CO1	Implement the programs by using basics and fundamental concepts of JAVA.	L3
CO2	Apply the knowledge of OOP principles to develop applications	L3
CO3	Analyze the given Java program to identify bugs and write correct code.	L4
CO4	Use APIs (Application Programming Interfaces) to develop applications in Java.	L3

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	3				3								3	3
CO2	3				3								3	3
CO3		3			3								3	3
CO4	3				3								3	3

	EXERCISES	Mapped CO
1	a. Java Program to print largest of three numbers b. Java program to calculate sum of all the numbers divisible by 3 from 1 to n. Print the sum. c. Write a Java program to calculate the sum of first "n" even integer numbers and "n" odd integer numbers excluding 0; d. Write a Java program to read the size of an array from keyboard. You have to initialize the integer array and insert the elements into it. You have to find the minimum number in that array and print the same. e. Write a Java program to find the average of all odd numbers present in the array and print the same.	CO1-CO4
2	Implement the programs by using the concepts of a. returning value from a method, b. constructors c. overloading methods, d. overloading constructors e. passing objects as a parameters.	CO1-CO4
3	Develop applications using the concepts of a. String class and its methods b. String Buffer and its methods c. String Tokenizer and its methods	CO1-C04
4	Implement the programs by using the concepts of a. Method overriding, b. dynamic method dispatch c. Abstract class, d. Using final in inheritance	CO1-CO4
5	Implement the programs by using the concepts of a. Implementing interfaces, b. Nested interfaces c. Interface references, d. Extending interfaces	CO1-CO4
6	A. Create a user defined package and demonstrate different ways of importing packages. B. Implement the programs by using the concepts of a. multiple catch clauses, b. finally c. Creating user defined exceptions	CO1-CO4
7	Implement the programs using a. Creating threads (two –ways), b. Creation of multiple threads c. Thread synchronization	CO1-CO4
8	Develop applications that demonstrate by using a. Key board event handling, b. Mouse event handling	CO1-CO4
9	Develop applications by using AWT controls a. Buttons b. TextField and TextArea c. GridLayoutManager	CO1-CO4
10	Develop applications by using Swing components a. JLabel b. JTextField c. JButton d. JComboBox.	CO1-CO4

Learning Resources
Text Books
The Java Complete Reference, Herbert Scheldt, 10/e, TMH Publications, 2018.
References
1. E. Balagurusamy, *Programming with JAVA*, 6/e, TMH Publications, 2014. 2. *Core Java: An Integrated Approach*, New: Includes All Versions up-to Java 8, by R. Nageswara Rao, Dream-Tech Publishers. 3. Kathy Sierra, *Head First Java*, 3/e, O'Reilly Media, 2021.
E-Recourses and other Digital Material
1. https://www.w3schools.com/java/java_intro.asp 2. https://www.tutorialspoint.com/java/index.htm