**LESSON PLAN**

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| Name | JAGADISH SAHOO | | | Course Code/Name: OOP through Java | | |
| Designation | Assistant Professor | | | Department | | Computer Science & Engg |
| Semester | 3rd | Section | D | No. of Hrs/week: | | 5 Hrs/week(1 class-2 Hrs.) |
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| Academic Regulation | | | | | AR 19 | |

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| **Sl. No** | **Proposed Date** | **Detail Description of Topics/Subtopics** | **Mode of Lecture** | **COs &POs** |
| 1 | **02/08/2022** | Introduction to Different types of programming languages, Description of Compiler and Interpreter  Discussing the Procedural &Object Oriented Programming Languages | Chalk &Talk | [CO1] [ PO1] |
| 2 | **03/08/2022** | Learning about Features of Object Oriented Programming | Chalk &Talk | [CO1] [ PO1] |
| 3 | **04/08/2022** | Learning the Features of Java, Downloading & Installing Java, Discussing the JVM Architecture,  Learning about Java IDEs – Eclipse & NetBeans, Writing first java program | Chalk &Talk | [CO1] [ PO1] |
| 4 | **09/08/2022** | Knowing the Program Compilation and Execution, Basic understanding of program. What are Operators? Different types of Operators, Typecasting | Chalk &Talk | [CO1] [ PO1] |
| 5 | **10/08/2022** | Discussing about Different types of control structures, Conditional Statements. Introduction to Loops/ Iterators , Jumping Statements | Chalk &Talk | [CO1] [ PO1] |
| 6 | **11/08/2022** | Learning about Java Arrays, Multidimensional Arrays, Knowing the Command Line Arguments, Using Scanner Class, Using Buffered Reader class, | Chalk &Talk | [CO1] [ PO1] |
| 7 | **16/08/2022** | Knowing about Constructors, Use of static Keyword in Java, Knowing about Constructors, Use of static Keyword in Java | Lab Oriented | [CO1] [ PO2] |
| 8 | **17/08/2022** | Discussing about Use of this Keyword in Java, Introduction to Array of Objects | Lab Oriented | [CO1] [ PO1] |
| 9 | **18/08/2022** | Learning the Concept of Access Modifiers (Public, Private, Protected, Default). Understanding Inheritance, Significance of Inheritance, | Chalk &Talk | [CO2] [ PO1] |
| 10 | **23/08/2022** | Knowing the Types of Inheritance and Java supported Inheritance, Use of super keyword, Polymorphism | Chalk &Talk | [CO2] [ PO1] |
| 11 | **24/08/2022** | Learning the Method Overloading, Constructor Overloading, Understanding the Method Overriding, Discussing the Dynamic Method Dispatching | Chalk &Talk | [CO2] [ PO2] |
| 12 | **30/08/2022** | Introduction to String Manipulations (String class, String Buffer). Learning the String Builder, String Tokenizer | Chalk &Talk | [CO2] [ PO2] |
| 13 | **01/09/2022** | Knowing about Abstract classes, Interfaces. Understanding the Multiple Inheritance Using Interfaces | Chalk &Talk | [CO2] [ PO1] |
| 14 | **06/09/2022** | Learning about Wrapper classes, Auto boxing and unboxing, | Chalk &Talk | [CO2] [ PO2] |
| 15 | **07/09/2022** | Introduction to Java API Packages, Accessing Packages, Creating User-Defined Packages | Chalk &Talk | [CO2] [ PO1] |
| 16 | **08/09/2022** | Learning Error and Exception Handling, | Chalk &Talk | [CO2] [ PO1] |
| 17 | **13/09/2022** | Discussing about Types of exceptions, Hierarchy of Exception classes, try, catch, | Chalk &Talk/ LCD Projector | [CO2] [ PO1] |
| 18 | **14/09/2022** | Understanding Finally, throw, throws. | LCD Projector | [CO2] [ PO3] |
| 19 | **15/09/2022** | User defined exception classes | Chalk &Talk | [CO2] [ PO3] |
| 20 | **20/09/2022** | Introduction to Multithreading | Chalk &Talk/ LCD Projector | [CO3] [ PO1] |
| 21 | **21/09/2022** | Learning Thread execution prevention methods. (yield(), join (), sleep()) | Chalk &Talk/ LCD Projector | [CO3] [ PO2] |
| 22 | **22/09/2022** | Understanding the Concept of Synchronization. | Chalk &Talk | [CO3] [ PO3] |
| 23 | **27/09/2022** | Discussing about Inter Thread Communication | LCD Projector | [CO3] [ PO3] |
| 24 | **28/09/2022** | Understanding the Basics of Deadlock, Demon & User Thread | Chalk &Talk | [CO3] [ PO3] |
| 25 | **29/09/2022** | Discussing the Improvement in Multithreading | LCD Projector | [CO3] [ PO1] |
| 26 | **18/10/2022** | Learning about Inner Class Introduction, Member inner class, Static inner class | Chalk &Talk | [CO3] [ PO1] |
| 27 | **19/10/2022** | Knowing about Local inner class, Anonymous inner class | LCD Projector | [CO3] [ PO2] |
| 28 | **20/10/2022** | Discussing about IO Streams Introduction, Byte Stream and Character Stream | Chalk &Talk | [CO3] [ PO1] |
| 29 | **26/10/2022** | Learning about Files and Random Access Files | LCD Projector | [CO3] [ PO1] |
| 30 | **27/10/2022** | Introduction to Serialization | Chalk &Talk | [CO3] [ PO1] |
| 31 | **01/11/2022** | Knowing about Collection framework, Util Package interfaces | Chalk &Talk | [CO3] [ PO1] |
| 32 | **09/11/2022** | Discussing about List, Set, Map. | Chalk &Talk/ LCD Projector | [CO3] [ PO2] |
| 33 | **10/11/2022** | Introduction to Applet, Life Cycle of an Applet | LCD Projector | [CO4] [ PO1] |
| 34 | **15/11/2022** | Learning about GUI with an Applet | LCD Projector | [CO4] [ PO2] |
| **35** | **16/11/2022** | Introduction to GUI,AWT | Chalk &Talk | [CO4] [ PO1] |
| 36 | **17/11/2022** | Knowing the Description of Components and Containers, Component/Container hierarchy | Chalk &Talk/ LCD Projector | [CO4] [ PO1] |
| **37** | **22/11/2022** | Understanding different Components/Container classes and their constructors | Chalk &Talk/ LCD Projector | [CO4] [ PO1] |
| **38** | **23/11/2022** | Learning the Event Handling | Chalk &Talk | [CO4] [ PO2] |
| **39** | **29/11/2022** | Discussing about Different mechanisms of Event Handling | LCD Projector | [CO4] [ PO2] |
| **40** | **30/11/2022** | Understanding Listener Interfaces & Introduction to Adapter classes | LCD Projector | [CO4] [ PO2] |

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| Text Books  T1. Programming in Java. Second Edition. Oxford Higher Education. (Sachin Malhotra/ Saurav Choudhary)  T2. JAVA Complete Reference (9th Edition) HerbaltSchelidt |
| Ref. Books  R1. Core Java For Beginners. (Rashmi Kanta Das), Vikas Publication  R2. Black Book Core Java. Nageswar Rao |
| Web References:  W1. www.javatpoint.com  W2. www.tutorialpoint.com |

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| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 14 | 15 | 16 |
| Units |  | **I** |  |  |  |  | **II** |  |  | **III** |  |  | **IV** |  |  |

**SUBJECT FACULTY H.O.D**