

**Jyotibaphule Govt. College, Radaur**  
Lesson Plan

**JAN to April 2023-2024**

**Name of the Assistant Professor – Dr. Rama Swami**  
**Subject : Computer Science**

Month	BCA 6 <sup>th</sup> Sem(JAVA)	B.A 4 <sup>th</sup> Sem(C++)	B.Com CAV 4 <sup>th</sup> Sem(JAVA)	BA 2 <sup>nd</sup> Sem SEC(ADVANCE SPREADSHEET TOOL)
JAN	Basic Principles of Object Oriented Programming, Introduction to Java, History and Features of Java, Java Virtual Machine (JVM), Java's Magic Bytecode: The Java Runtime Environment; Basic Language Elements: Lexical Tokens, Identifiers, Keywords, Literals, Comments, Primitive Data types, Operators, Assignments; Input/output in Java: Basics, I/O Classes, Reading Console Input, Control Structures in Java: Decision and Loop Control Statements	Object oriented Programming Features and benefits, Class and object , Data Hiding & Encapsulation, Structures, data members and member function ,Scope resolution operator and its significance. , Static Data Member , Static member functions ,Nested and Local Class ,Accessing members of class and structure Assignment: features of oops	Introduction to Java-features of Java- object oriented concepts- data types – variables- arrayoperators- control statements- input and output- scanner and system - class print(), printn(), printf() methods; Class-objects- constructors- overloading method- access control- static and fixed methodsinner classes- string class- inheritance.	Manage Workbook Options and Settings: Create Worksheets and Workbooks, navigate in Worksheets and Workbooks, Format Worksheets and Workbooks, Customize Options and Views for Worksheets and Workbooks, Configure Worksheets and Workbooks for Distribution Apply Custom Data Formats and Layouts: Apply Custom Data Formats and Validation, Apply Advanced Conditional Formatting and Filtering, Create and Modify Custom Workbook Elements
FEB	Class and Object in Java: Defining Class in Java, Creating Objects of a Class, Defining Methods, Argument Passing Mechanism, Using Class and Objects, Constructors, Nested Class, Inner Class, Abstract Class, Dealing	Constructor, Initialization using constructor, types of constructor – Default, parameterized & copy constructors ,constructors overloading , default values to parameters, destructors, console, I/O Hierarchy of console stream classes, unformatted and formatted I/O operations Manipulators, friend	GUI components- common GUI event types and listener interfaces - Joptionpane – Jlabel – JtextField - Jbutton – Jcheckbox – Jtextare - JcomboBox – Jlist – Jpanel - Mouse Event Handling – Adapter Classes - Key Event Handling.	Create Tables: Create and Manage Tables, Manage Table Styles and Options, Filter and Sort a Table Perform Operations with Formulas and Functions: Summarize Data by using Functions, Perform Conditional Operations by using Functions, Format and Modify Text by using Functions.

	<p>with Static Members;          Array &amp; String in Java:          Defining an Array,          Initializing &amp; Accessing          Array, Multi-Dimensional          Array, Defining String,          Operation on Array and          String, Creating Strings          using String Class,          Creating Strings using          String Buffer Class,;          Polymorphism in Java:          Basic Concept, Types,          Overriding vs.          Overloading,          Implementation</p>	<p>function ,friend Class Arrays, Array of          Objects, Passing and Returning          Objects to Functions String Handling          in C++, Functions Overloading Inline          Functions</p>		
<p>Mar</p>	<p>Extending Classes and          Inheritance in Java:          Benefits of Inheritance,          Types of Inheritance in          Java, Access Attributes,          Inheriting Data Members          and Methods, Role of          Constructors in          Inheritance, Use of          "super", Packages &amp;          Interfaces: Basic Concepts          of Package and Interface,          Organizing Classes and          Interfaces in Packages,          Defining Package, Adding          Classes from a Package to          Your Program, CLASSPATH          Setting for Packages,          Import Package, Naming          Convention For Packages ,          Access Protection in          Packages, Standard          Packages</p>	<p>console , /I/O Hierarchy of console          stream classes, unformatted and          formatted /I/O operations          Manipulators, friend function ,friend          Class Arrays, Array of Objects,          Passing and Returning Objects to          Functions String Handling in C++,          Functions Overloading Inline          Functions</p>	<p>REVISION FIRST AND SECOND          UNIT .....</p>	<p>Create Charts and Objects: Create Charts, Format          Charts, Insert and Format Objects Manage          Workbook Options and Settings: Manage          Workbooks, Manage Workbook Review Restrict          editing</p>

*Aravind*

April	<p>Exception Handling in Java: The Idea behind Exception, Types of Exception, Use of try, catch, finally, throw, throws in Exception Handling, In-built and User Defined Exceptions, Checked and Un-Checked Exceptions, Catching more than one Exception; Applet in Java: Applet Basics, Applet Architecture, Applet Life Cycle, Applet Tag, Parameters to Applet, Embedding Applets in Web page, Creating Simple Applets; GUI Programming: Designing Graphical User Interfaces in Java, Components and Containers, Using Containers, Layout Managers, AWT Components, AWT Classes, AWT Controls,</p>	<p>console, I/O Hierarchy of console stream classes, unformatted and formatted I/O operations Manipulators, friend function, friend Class Arrays, Array of Objects, Passing and Returning Objects to Functions String Handling in C++, Functions Overloading Inline Functions</p>	<p>Layout Managers – Flow layout, BorderLayout, GridLayout - Graphics and Java 2D - Graphics contexts and Graphics objects - Color control - Font Control – Drawing Lines, Rectangles and ovals - JSlider Using menus with frames</p>	<p>Create Advanced Formulas: Apply Functions in Formulas, Look up data by using Functions, Apply Advanced Date and Time Functions, Perform Data Analysis and Business Intelligence, Define Named Ranges and Objects, Create Advanced Charts and Tables: Create and Manage PivotTables, Create and Manage Pivot Charts</p>
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