



Nagar Yuwak Shikshan Sanstha's

Yeshwantrao Chavan College of Engineering

(An Autonomous Institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

Hingna Road, Wanadongri, Nagpur - 441 110

NAAC A++

Ph.: 07104-237919, 234623, 329249, 329250 Fax: 07104-232376, Website: www.ycce.edu

Department of Computer Technology

Vision of the Department

To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

Mission of the Department

To establish learning ambience for ushering in computer engineering professionals in core and multidisciplinary area by developing Problem-solving skills through emerging technologies.

Session 2025-2026

Vision: To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration	Mission: To establish learning ambience for ushering in computer engineering professionals in core and multidisciplinary area by developing Problem-solving skills through emerging technologies.
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Program Educational Objectives of the program (PEO): (broad statements that describe the professional and career accomplishments)

PEO1	Preparation	P: Preparation	Pep-CL abbreviation pronounce as Pep-si-IL easy to recall
PEO2	Core Competence	E: Environment (Learning Environment)	
PEO3	Breadth	P: Professionalism	
PEO4	Professionalism	C: Core Competence	
PEO5	Learning Environment	L: Breadth (Learning in diverse areas)	

Program Outcomes (PO): (statements that describe what a student should be able to do and know by the end of a program)

Keywords of POs:

Engineering knowledge, Problem analysis, Design/development of solutions, Conduct Investigations of Complex Problems, Engineering Tool Usage, The Engineer and The World, Ethics, Individual and Collaborative Team work, Communication, Project Management and Finance, Life-Long Learning

PSO Keywords: Cutting edge technologies, Research

"I am an engineer, and I know how to apply engineering knowledge to investigate, analyse and design solutions to complex problems using tools for entire world following all ethics in a collaborative way with proper management skills throughout my life." to contribute to the development of cutting-edge technologies and Research.

Integrity: I will adhere to the Laboratory Code of Conduct and ethics in its entirety.

Name and Signature of Student and Date

(Signature and Date in Handwritten)

Richa Waghmare


20/01/26



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Session	2025-26 (EVEN)	Course Name	JAVA FSD Lab
Semester	4	Course Code	23ADS1407
Roll No	15	Name of Student	Richa Waghmare

Practical Number	02
Course Outcome	1. Develop backend applications using object-oriented programming concepts and implement data persistence using relational databases. 2. Design and implement interactive and responsive user interfaces using standard web technologies. 3. Build and integrate complete web applications by combining client-side and server-side components
Aim	Write a program to demonstrate concept of class, object and methods in java.
Problem Definition	Design and implement a Java program that demonstrates the fundamental concepts of Object-Oriented Programming, namely class, object, and methods. The program should define multiple classes with data members and member functions, create multiple objects of these classes in the main method, initialize their data, and invoke their methods to perform operations such as displaying batch details, calculating the sum of numbers, and showing student information. This practical aims to help understand how classes act as blueprints, objects represent real-world entities, and methods define the behavior of objects in Java.
Theory (100 words)	In Java, a class is a blueprint or template used to create objects. It defines the properties (variables) and behaviors (methods) that the objects will have. An object is a real-world entity and an instance of a class that represents actual values for the variables defined in the class. Objects use methods to perform actions. A method is a block of code defined inside a class that performs a specific task. Methods help in code reusability, modularity, and readability. Using classes, objects, and methods supports object-oriented programming principles in Java.



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Procedure and Execution (100 Words)	Algorithm: <ol style="list-style-type: none">1. Start2. Define class Add with a method add(int a, int b) to calculate and display the sum of two numbers.3. Define class Ycce with data members branch and year, and a method info() to display student details.4. Define class Batch with data members batch_no, lab, and course, and a method practical() to display lab information.5. In the main() method:6. Create three objects of Batch class.7. Create three objects of Add class.8. Create three objects of Ycce class.9. Assign course names, batch numbers, and lab numbers to each Batch object.10. Call practical() method for each Batch object to display lab details.11. Call add() method for each Add object with different values to display sum results.12. Assign branch names and year values to each Ycce object.13. Call info() method for each Ycce object to display student information.14. Stop
	Code: <pre>public class Add { public void add(int a, int b){ System.out.println("Students done sum of "+a+" and "+b+" and got result as "+(a+b)); } } public class Ycce { String branch; int year; public void info(){ System.out.println("Student is of "+branch+ " Branch and "+" Year"); } }</pre>



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```
public class Batch {
    int batch_no;
    int lab;
    String course;

    public void practical(){
        System.out.println("Today is "+ lab+" lab of "+course+" of
"+batch_no+"batch");
    }
}

public class Main {
    public static void main(String[] args) {
        Batch b1 = new Batch();
        Batch b2 = new Batch();
        Batch b3 = new Batch();
        Add a1 = new Add();
        Add a2 = new Add();
        Add a3 = new Add();
        Ycce y1 = new Ycce();
        Ycce y2 = new Ycce();
        Ycce y3 = new Ycce();
        b1.course = "Java";
        b2.course = "Python";
        b3.course = "OS";
        b1.batch_no = 1;
        b2.batch_no = 2;
        b3.batch_no = 3;
        b1.lab = 2;
        b2.lab = 4;
        b3.lab = 6;
        b1.practical();
        b2.practical();
        b3.practical();
        a1.add(15,13);
        a2.add(16,19);
        a3.add(34,89);
        y1.branch = "AIDS";
        y2.branch = "CT";
        y3.branch = "IOT";
        y1.year = 2;
        y2.year = 2;
        y3.year = 2;
        y1.info();
    }
}
```



	<pre>y2.info(); y3.info(); } }</pre> <p>Output:</p> <pre>"C:\Program Files\Java\jdk-22\bin\java.exe" "-javaagen Today is 2 lab of Java of 1batch Today is 4 lab of Python of 2batch Today is 6 lab of OS of 3batch Students done sum of 15 and 13 and got result as 28 Students done sum of 16 and 19 and got result as 35 Students done sum of 34 and 89 and got result as 123 Student is of AIDS Branch and Year Student is of CT Branch and Year Student is of IOT Branch and Year Process finished with exit code 0</pre>
Output Analysis	<ul style="list-style-type: none">• First three lines show batch practical details.• Next three lines display the sum of numbers performed by the Add class.• Last three lines display student branch and year information from the Ycce class.
Link of student Github profile where lab assignment has been uploaded	https://github.com/Binarybard12/JavaFSD
Conclusion	<p>Thus, this practical successfully demonstrated the concepts of class, object, and methods in Java. By creating multiple classes and objects, assigning values to data members, and invoking methods, we understood how object-oriented programming works in Java. The program showed how classes act as blueprints, objects store real-time data, and methods define the behavior of objects. This practical helped in improving clarity about code structure, reusability, and modular programming, which are essential features of Java and object-oriented programming.</p>



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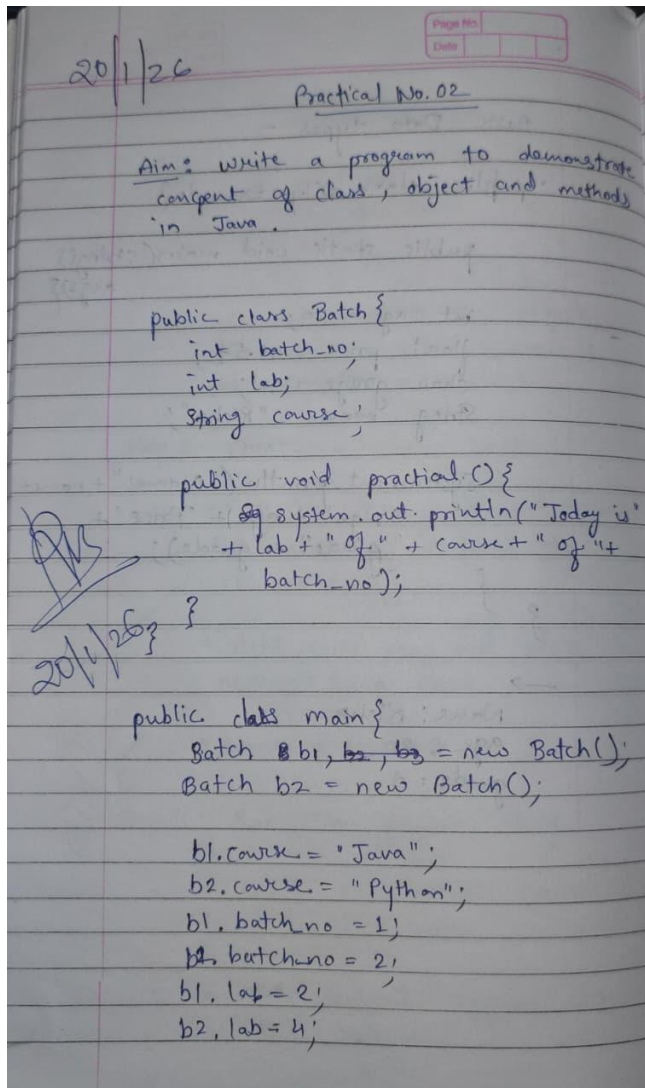
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