

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:

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: Dream of where you want. Mission: Means to achieve Vision	Vision: Dream of where you want.	Mission: Means to achieve Vision
--	----------------------------------	----------------------------------

Program Educational Objectives of the program (PEO): (broad statements that describe the professional and career accomplishments)

PEO 1	Preparation	P: Preparation	Pep-CL abbreviation pronounce as Pep-si-
PEO 2	Core Competence	E: Environment (Learning Environment)	lL easy to recall
PEO 3	Breadth	P: Professionalism	
PEO 4	Professionalism	C: Core Competence	
PEO5	Learning Environme nt	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.

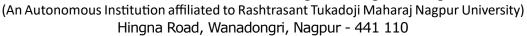
Name and Signature of Student and Date

(Signature and Date in Handwritten) VEDANT JIWANAPURKAR

Toedard



Yeshwantrao Chavan College of Engineering





NAAC A++

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

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	2025-26 (ODD)	Course Name	Lab: JavaFSD
Semester	5	Course Code	CT
Roll No	81	Name of Student	Vedant Jiwanapurkar

Practical Number	1		
Course Outcome	Proper Understanding of Basic Java programs covering loops, arrays and conditionals and implementation of programs.		
Aim	Implementation of basic Java programs and introduction to OOPS		
Problem Definition	1.Problem Statement: Lottery		
	Develop a program to play lottery.the program randomly generates a lottery of a two-digit number, prompts the user to enter a two-digit number, and determines whether the user wins according to the following rules: 1. If the user input matches the lottery number in the exact order, the award is \$10,000. 2. If all digits in the user input match all digits in the lottery number, the award is \$3,000. 3. If one digit in the user input matches a digit in the lottery number , the award is \$1,000. 2. Problem Statement: Computing Body Mass Index		
	Write a program that promts the and height in inches and disple the BMI.	he user to enter a weight in pounds ays	
		ilograms, one inch is 0.0254 meters.	
	It can be calculated by taking your weight in kilograms and dividing it by the square of your height		
	in meters.		
	2. The interpretation of E is as follows:	BMI for people 20 years or older	
	ВМІ	Interpretation	
	BMI<18.5	Underweight	
	18.5<=BMI<25.0	Normal	
	25.0<=BMI<30.0	Overweight	

Obese

30.0<=BMI



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:

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

Theory (100 words)	Lottery Game Theory: The lottery program generates a random two-digit number using Java's Random class. The user inputs their guess. Key logic includes: extracting digits using division and modulus, comparing numbers for exact match, checking if both digits match in any order, and verifying if at least one digit matches. Conditional statements determine the prize. BMI Calculation Theory: The BMI program first converts weight (pounds → kilograms) and height (inches → meters) using constants. The BMI is computed as weight / (height²). Key logic involves unit conversion, mathematical formula application, and classification interpretation based on BMI ranges
Procedure and Execution (100 Words)	 Algorithm: Lottery Game Generate a random number between 10 and 99. Ask the user to enter a two-digit number. If the guess equals the random number → print "Win \$10,000". Else if both digits match but in different order → print "Win \$3,000". Else if any one digit matches → print "Win \$1,000". Else → print "No match". Stop.
	 2. BMI 1. Ask the user for weight in pounds. 2. Ask the user for height in inches. 3. Convert weight to kilograms (weight * 0.45359237). 4. Convert height to meters (height * 0.0254). 5. Calculate BMI = weightKg / (heightMeters * heightMeters). 6. Show the BMI value. 7. Show the category (Underweight, Normal, Overweight, Obese). 8. Stop.

Yeshwantrao Chavan College of Engineering



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





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

Department of Computer Technology

Vision of the Department

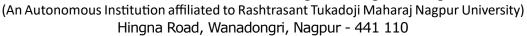
To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

Mission of the Department

```
Code:
1) import java.util.*;
 public class Practical 1
public static void main(String[] args)
{ Scanner sc = new Scanner(System.in);
Random random = new Random();
int lottery = 10 + random.nextInt(90); // two-digit random number
System.out.print("Enter your two-digit number: "); int
guess = sc.nextInt();
int 11 = lottery / 10;
int 12 = 10ttery % 10;
int g1 = guess / 10;
int g2 = guess \% 10;
System.out.println("Lottery number: " + lottery); if
(guess == lottery)
System.out.println("Exact match! Win $10,000");
else if (g1 == 12 \&\& g2 == 11)
  System.out.println("Digits match! Win $3,000");
  else if (g1 == 11 \parallel g1 == 12 \parallel g2 == 11 \parallel g2 == 12)
  System.out.println("One digit match! Win $1,000");
  else {
System.out.println("No match.");
sc.close();
2) import java.util.*;
 public class Practical 1b
public static void main(String[] args) { Scanner
sc = new Scanner(System.in);
System.out.print("Enter weight in pounds: ");
double weight = sc.nextDouble();
System.out.print("Enter height in inches: ");
double height = sc.nextDouble();
double weightKg = weight * 0.45359237; double
heightM = height * 0.0254;
double bmi = weightKg / (heightM * heightM);
System.out.printf("BMI: %.2f%n", bmi);
if (bmi < 18.5) { System.out.println("Underweight");
} else if (bmi \leq 25)
{ System.out.println("Normal weight");
} else if (bmi < 30) {
```



Yeshwantrao Chavan College of Engineering





NAAC A++ Ph.: 07104-237919, 234623, 329249, 329250 Fax: 07104-232376, Website:

Department of Computer Technology

Vision of the Department

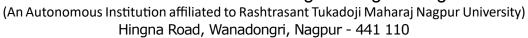
To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

Mission of the Department

```
System.out.println("Overweight");
                       { System.out.println("Obese");
                       sc.close();
                      Output:
                          Output
                        Enter your two-digit number:
                        Lottery number: 38
                        One digit match! Win $1,000
                              Code Execution Successful
                                             in pounds:
                        Enter height
                                                 inches: BMT:
                        Underweight
                              Code Execution Successful
Output Analysis
                      1. Lottery
                      When the program runs, it first generates a random two-digit
                      number and asks the user to guess it. If the guess is exactly the
                      same as the lottery number, the highest prize of $10,000 is
                      awarded. If both digits are correct but their positions are
                      reversed, the prize is $3,000. If only one digit matches in any
                      position, the prize is $1,000. If no digits match, the program
                      shows that there is no win.
                      2. BMI
                      The program takes the user's weight in pounds and height in
                      inches, converts them to kilograms and meters, and calculates the
                      BMI using the given formula. Based on the result, it classifies the
                      person as underweight, normal weight, overweight, or obese. The
                      classification depends on BMI ranges: less than 18.5 is
                      underweight, 18.5-24.9 is normal, 25-29.9 is overweight, and 30
                      or above is obese
Link of student
                       https://github.com/vedantjiwanapurkar-ctrl/LAB-JAVA FSD.git
Github profile
where lab
assignment has
been uploaded
```



Yeshwantrao Chavan College of Engineering





NAAC A++ Ph.: 07104-237919, 234623, 329249, 329250 Fax: 07104-232376, Website:

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

Conclusion	In this practical, two different Java programs were developed to apply fundamental programming concepts in real scenarios. The Lottery Game showcased the use of random number generation, digit separation, and conditional logic to evaluate different winning cases. The BMI Calculator demonstrated data input, mathematical calculations, and category classification based on given ranges. Both tasks strengthened skills in user interaction, arithmetic operations, control structures, and logical thinking. This practical proved that by combining basic programming elements, we can create functional applications that are both useful and engaging for end users.				
Plag Report	Date		Septemb	er 21, 2025	
(Similarity index <	Exclude URL:		NO		
12%)		Unique Content	96	Word Count	914
		Plagiarized Content	4	Records Found	0
Date	23/09/2025				