

1. Write a program to print the message "Welcome to Java"?
2. Write a program to show the working of arithmetic operators?
3. Write a program to enter the age and check whether the person is eligible to vote or not?
4. Write a program to enter three numbers and find the greatest of them using if-else statement?
5. Enter the year and check whether it is a leap year or not?
6. Write a program in Java to take the user's purchase amount and apply a discount using the following: a) 10% if amount ≥ 1000 b) 20% if amount ≥ 5000 and no discount otherwise. Print the final amount after discount?
7. Write a program to print the sum of the first 10 natural numbers?
8. Write a program to enter a number and find the sum of its digits?
9. Enter a number and check whether it is a perfect number or not?
10. Enter the value of a, b, c and determine the nature of roots using the formula $b^2 - 4ac$: a) if $b^2 - 4ac = 0$, roots are real and equal b) if $b^2 - 4ac > 0$, roots are real and unequal c) if $b^2 - 4ac < 0$, roots are imaginary?
11. Write a program to enter 10 elements in an array and find their sum?
12. Write a program to input numbers in an array and find the sum of those numbers which are divisible by 4 and also find the sum of the odd numbers which are divisible by 7?
13. Write a program to find the transpose of a matrix?
14. Write a program to find the sum of two matrices only if they are of the same order?
15. Write a Java program to calculate the area of a rectangle using an object, including input and calculate output functions?
16. Write a program to print the pattern

```
1  
. .  
2 3  
4 5 6  
7 8 9 10  
11 12 13 14 15
```

17. Find the pattern:

```
1  
1 1  
1 2 1
```

1 3 3 1
1 4 6 4 1
1 5 10 5 1

18. Write a program to find the multiplication of two matrices?
19. Write a program to calculate the volume of a cuboid using class and object, including input and output functions?
20. Write a program to calculate the length of a string with function and without function?
21. Write a program in Java to convert a string to uppercase or lowercase without using functions?
22. Write a program to demonstrate constructor overloading for the working of student?
23. Write a program to demonstrate constructor overloading for the working of employee?
24. Write a program to create packages?
25. Write a program to create a package for addition of two numbers?
26. Write a program to create a package to show quotient, remainder and multiplication?
27. Write a program to handle exception for division by zero?