**Number Program :-**

**1) write a java program to check given number is Leap year or not.**

**2) Write a Java Program to add digits from a given number.**

**3)Write a Java Program to count digits from a number.**

**4)write a java program to check given number is even or not.**

**5)write a java program to check given number is odd or not.**

**6)write a java program to add only even digits from a given number.**

**7)write a java program to add only odd digit from a given number.**

**8)write a java program to find factorial of given number.**

**9)write a java program to find the power of a base.**

**10)write a java program to reverse a given number.**

**11)write a java program to check given number is palindrome or not.**

**12)write a java program to check given number is neon number or not.**

**13) write a java program to check given number is spy number or not.**

**14) write a java program to check biggest of three given number.**

**15) write a java program to check given number is Perfect number or not.**

**16) write a java program to print LCM of given number.**

**17) write a java program to print GCD/HCF of given number.**

**18) write a java program to convert Binary to Decimal of given number.**

**19) write a java program to convert Decimal to Binary of given number.**

**20) write a java program to check given number first digit Even or Not.**

**21) write a java program to check given number is Perfect Square number or not.**

**22) write a java program to check given number is Prime number or not.**

**23) write a java program to Print Prime number in Given Range.**

**24) write a java program to check given number is Sunny number or not.**

**25) write a java program to check given number is Xylem or Phloem number.**

**26) write a java program to check given number is ArmStrong number or not.**

**27) write a java program to Print ArmStrong number in Given Range.**

**28) write a java program to check given number is Autobiographic number or not.**

**29) write a java program to check given number is Automorphic number or not.**

**30)write a java program to check given number is Evil number or not.**

**31) write a java program to Print Fibonacci series.**

**32) write a java program to Print Fibonacci number in Given Range.**

**33) write a java program to check given number is Tech number or not.**

**34)write a java program to check given number is Happy number or not.**

**35)write a java program to check given number is Unique number or not.**

**36)write a java program to check given number is Duck number or not.**

**37)write a java program to check given number first digit is even or not.**

**38)write a java program to print first digit in a given number.**

**39)write a java program to check given number is Unique number or not**

**40)write a java program to check given number is Buzz number or not.**

**41)write a java program to check given number is smith number or not**

**42)write a java program to print alternative prime number.**

**43)write a java program to check given number is positive negative or zero number or not**

**44)Buzz Number**

**45)Disarium Number**

**46)Strontio Number**

**47)Smith Number**

### **✅ Program 1: Check if a number is positive, negative or zero**

**Input:  
 num = -5  
 Output:  
 The number is negative.  
 Explanation:  
 We use a simple if-else check:**

* **If num > 0, it's positive.**
* **If num < 0, it's negative.**
* **Else, it's zero.**

### **✅ Program 2: Check if a number is even or odd**

**Input:  
 num = 8  
 Output:  
 The number is even.  
 Explanation:  
 A number is even if num % 2 == 0, otherwise it's odd.**

### **✅ Program 3: Find the largest of three numbers**

**Input:  
 a = 4, b = 9, c = 7  
 Output:  
 The largest number is 9.  
 Explanation:  
 Compare all three using if-else or use Math.max.**

### **✅ Program 4: Print numbers from 1 to N**

**Input:  
 N = 5  
 Output:  
 1 2 3 4 5  
 Explanation:  
 Use a for loop from 1 to N and print each number.**

### **✅ Program 5: Print all even numbers from 1 to N**

**Input:  
 N = 6  
 Output:  
 2 4 6  
 Explanation:  
 Use a for loop from 1 to N and print if i % 2 == 0.**

### **✅ Program 6: Print all odd numbers from 1 to N**

**Input:  
 N = 7  
 Output:  
 1 3 5 7  
 Explanation:  
 Check if i % 2 != 0 in a loop from 1 to N.**

### **✅ Program 7: Sum of first N natural numbers**

**Input:  
 N = 4  
 Output:  
 Sum = 10  
 Explanation:  
 Sum = N \* (N + 1) / 2 OR loop and add i from 1 to N.**

### **✅ Program 8: Sum of digits of a number**

**Input:  
 num = 1234  
 Output:  
 Sum = 10  
 Explanation:  
 Extract digits using num % 10 and divide by 10 iteratively.**

### **✅ Program 9: Reverse a number**

**Input:  
 num = 1234  
 Output:  
 Reversed = 4321  
 Explanation:  
 Use a loop: rev = rev \* 10 + (num % 10).**

### **✅ Program 10: Count number of digits in a number**

**Input:  
 num = 7890  
 Output:  
 Digits = 4  
 Explanation:  
 Count how many times you divide the number by 10 until 0.**

### **✅ Program 11: Find the factorial of a number**

**Input:  
 num = 5  
 Output:  
 Factorial = 120  
 Explanation:  
 Factorial of 5 = 5 × 4 × 3 × 2 × 1 = 120. Use a loop or recursion.**

### **✅ Program 12: Check if a number is prime**

**Input:  
 num = 13  
 Output:  
 13 is a prime number.  
 Explanation:  
 Check if divisible by any number from 2 to √num. If not, it's prime.**

### **✅ Program 13: Print all prime numbers in a range**

**Input:  
 start = 10, end = 20  
 Output:  
 11 13 17 19  
 Explanation:  
 Loop from 10 to 20, check each number if it's prime using the method from Program 12.**

### **✅ Program 14: Check if a number is a palindrome**

**Input:  
 num = 121  
 Output:  
 121 is a palindrome.  
 Explanation:  
 Reverse the number and compare with the original.**

### **✅ Program 15: Check if a number is an Armstrong number**

**Input:  
 num = 153  
 Output:  
 153 is an Armstrong number.  
 Explanation:  
 153 = 1³ + 5³ + 3³ = 153. Each digit raised to the power of number of digits, then summed.**

### **✅ Program 16: Find GCD of two numbers**

**Input:  
 a = 24, b = 36  
 Output:  
 GCD = 12  
 Explanation:  
 Use Euclidean algorithm: GCD(a, b) = GCD(b, a % b) until b == 0.**

### **✅ Program 17: Find LCM of two numbers**

**Input:  
 a = 4, b = 5  
 Output:  
 LCM = 20  
 Explanation:  
 LCM = (a × b) / GCD(a, b)**

### **✅ Program 18: Check if a number is perfect**

**Input:  
 num = 28  
 Output:  
 28 is a perfect number.  
 Explanation:  
 Sum of its proper divisors (1 + 2 + 4 + 7 + 14) = 28.**

### **✅ Program 19: Check if a number is a strong number**

**Input:  
 num = 145  
 Output:  
 145 is a strong number.  
 Explanation:  
 145 = 1! + 4! + 5! = 1 + 24 + 120 = 145.**

### **✅ Program 20: Check if a number is automorphic**

**Input:  
 num = 76  
 Output:  
 76 is an automorphic number.  
 Explanation:  
 76² = 5776. Since the number ends with 76, it's automorphic.**

## **✅ Programs 21–30**

### **21. Generate first N prime numbers**

**Input: N = 5  
 Output: 2 3 5 7 11  
 Explanation: Use a loop and check for primes until N primes are found.**

### **22. Generate Fibonacci series up to N terms**

**Input: N = 6  
 Output: 0 1 1 2 3 5  
 Explanation: Start with 0 and 1, then use next = a + b.**

### **23. Check if a number is a Fibonacci number**

**Input: 21  
 Output: 21 is a Fibonacci number.  
 Explanation: A number is Fibonacci if 5\*n² + 4 or 5\*n² - 4 is a perfect square.**

### **24. Find the nth Fibonacci number using recursion**

**Input: n = 6  
 Output: 5  
 Explanation: fib(n) = fib(n-1) + fib(n-2)**

### **25. Convert decimal to binary**

**Input: 10  
 Output: 1010  
 Explanation: Divide by 2 repeatedly and store remainders.**

### **26. Convert binary to decimal**

**Input: 1010  
 Output: 10  
 Explanation: Multiply each digit by 2^position from right to left.**

### **27. Convert decimal to octal**

**Input: 20  
 Output: 24  
 Explanation: Divide by 8 repeatedly and store remainders.**

### **28. Convert octal to decimal**

**Input: 24  
 Output: 20  
 Explanation: Use positional values of base 8.**

### **29. Convert decimal to hexadecimal**

**Input: 255  
 Output: FF  
 Explanation: Divide by 16 and convert remainders to hex digits.**

### **30. Convert hexadecimal to decimal**

**Input: 1A  
 Output: 26  
 Explanation: Convert each digit by multiplying with 16^position.**

## **✅ Programs 31–40**

### **31. Find all divisors of a number**

**Input: 12  
 Output: 1 2 3 4 6 12  
 Explanation: Loop from 1 to n and check if n % i == 0.**

### **32. Count number of factors of a number**

**Input: 10  
 Output: 4  
 Explanation: Divisors: 1, 2, 5, 10**

### **33. Check if a number is Harshad number**

**Input: 18  
 Output: 18 is a Harshad number.  
 Explanation: 18 / (1+8) = 2**

### **34. Check if a number is a Duck number**

**Input: 1023  
 Output: 1023 is a Duck number.  
 Explanation: It contains a '0' (but not at the start).**

### **35. Check if a number is a Spy number**

**Input: 1124  
 Output: Spy number  
 Explanation: 1+1+2+4 = 8, 1×1×2×4 = 8**

### **36. Check if a number is a Kaprekar number**

**Input: 45  
 Output: Kaprekar number  
 Explanation: 45² = 2025 → 20 + 25 = 45**

### **37. Check if a number is a Neon number**

**Input: 9  
 Output: Neon number  
 Explanation: 9² = 81 → 8+1 = 9**

### **38. Generate N twin prime pairs**

**Input: 3  
 Output: (3,5) (5,7) (11,13)  
 Explanation: Primes that differ by 2.**

### **39. Find HCF using Euclidean algorithm**

**Input: 48, 18  
 Output: 6  
 Explanation: Recursively apply HCF(a, b) = HCF(b, a % b)**

### **40. Find power of a number (a^b)**

**Input: 2^5  
 Output: 32  
 Explanation: Multiply a, b times or use Math.pow.**

## **✅ Programs 41–50**

### **41. Find square root without Math.sqrt**

**Input: 25  
 Output: 5  
 Explanation: Use binary search for square root.**

### **42. Find cube root of a number**

**Input: 27  
 Output: 3  
 Explanation: Try multiplying numbers until cube matches.**

### **43. Sum of squares of digits**

**Input: 123  
 Output: 1² + 2² + 3² = 14  
 Explanation: Square each digit and sum.**

### **44. Sum of cubes of digits**

**Input: 123  
 Output: 36  
 Explanation: 1³ + 2³ + 3³**

### **45. Print first N happy numbers**

**Input: 5  
 Output: 1 7 10 13 19  
 Explanation: Replace number by sum of squares of digits. Repeat until 1.**

### **46. Palindrome using recursion**

**Input: 121  
 Output: Palindrome  
 Explanation: Recursively compare first and last digits.**

### **47. Find digital root of a number**

**Input: 9875  
 Output: 2  
 Explanation: 9+8+7+5 = 29 → 2+9 = 11 → 1+1 = 2**

### **48. Product of digits of a number**

**Input: 1234  
 Output: 24  
 Explanation: Multiply all digits.**

### **49. Swap two numbers without temp variable**

**Input: a = 5, b = 3  
 Output: a = 3, b = 5  
 Explanation: Use a = a + b, b = a - b, a = a - b**

### **50. Print number triangle pattern**

**Input: 3  
 Output:**

**CopyEdit**

**1**

**1 2**

**1 2 3**

## **✅ Programs 51–60**

### **51. Convert binary to octal**

**Input: 1010  
 Output: 12  
 Explanation: Convert to decimal, then to octal.**

### **52. Convert octal to binary**

**Input: 12  
 Output: 1010  
 Explanation: Convert to decimal, then to binary.**

### **53. Check if a number is a magic number**

**Input: 1729  
 Output: Magic number  
 Explanation: Sum of digits until single digit = 1**

### **54. Check if a number is a Smith number**

**Input: 666  
 Output: Smith number  
 Explanation: Sum of digits = Sum of prime factor digits.**

### **55. Find highest set bit position**

**Input: 10 (1010)  
 Output: 4  
 Explanation: Most significant bit set.**

### **56. Check if a number is power of 2**

**Input: 8  
 Output: Yes  
 Explanation: Only one bit set: n & (n - 1) == 0**

### **57. Count set bits in a number**

**Input: 13  
 Output: 3  
 Explanation: Binary 1101**

### **58. Check if two numbers are co-prime**

**Input: 8, 15  
 Output: Co-prime  
 Explanation: GCD = 1**

### **59. Nth term of GP**

**Input: a = 2, r = 3, n = 4  
 Output: 54  
 Explanation: GP = a \* r^(n-1)**

### **60. Nth term of AP**

**Input: a = 2, d = 5, n = 3  
 Output: 12  
 Explanation: AP = a + (n - 1)\*d**

### **61. Find sum of AP series**

**Input: a = 2, d = 3, n = 5  
 Output: 40  
 Explanation: Sum = n/2 × [2a + (n - 1)d]**

### **62. Find sum of GP series**

**Input: a = 1, r = 2, n = 4  
 Output: 15  
 Explanation: Sum = a × (r^n - 1) / (r - 1)**

### **63. Find remainder without % operator**

**Input: 10 / 3  
 Output: 1  
 Explanation: remainder = a - (a / b) \* b**

### **64. Find quotient without / operator**

**Input: 10 / 2  
 Output: 5  
 Explanation: Subtract divisor from dividend until 0.**

### **65. Find average of digits**

**Input: 1234  
 Output: 2.5  
 Explanation: Sum of digits / number of digits.**

### **66. Sum of even digits only**

**Input: 123456  
 Output: 2 + 4 + 6 = 12  
 Explanation: Use % 2 == 0 to filter.**

### **67. Sum of odd digits only**

**Input: 123456  
 Output: 1 + 3 + 5 = 9  
 Explanation: Use % 2 != 0 to filter.**

### **68. Check if number is binary (only 0s and 1s)**

**Input: 101011  
 Output: Valid binary  
 Explanation: Check each digit is either 0 or 1.**

### **69. Find smallest digit in a number**

**Input: 52749  
 Output: 2  
 Explanation: Traverse digits and keep minimum.**

### **70. Find largest digit in a number**

**Input: 52749  
 Output: 9  
 Explanation: Traverse digits and keep maximum.**

## **✅ Programs 71–80**

### **71. Find number of trailing zeros in factorial**

**Input: 10  
 Output: 2  
 Explanation: Count multiples of 5 in factorial.**

### **72. Check if a number is palindrome using string**

**Input: 1221  
 Output: Palindrome  
 Explanation: Reverse string and compare.**

### **73. Sum of prime digits only**

**Input: 2375  
 Output: 2 + 3 + 7 + 5 = 17  
 Explanation: Check each digit if prime.**

### **74. Print first N palindromes**

**Input: N = 5  
 Output: 1 2 3 4 5  
 Explanation: All single digits are palindromes.**

### **75. Check if number is pronic (product of two consecutive numbers)**

**Input: 12  
 Output: Yes (3×4)  
 Explanation: Check n = i × (i+1)**

### **76. Check if number is buzz number (ends with 7 or divisible by 7)**

**Input: 27  
 Output: Buzz number  
 Explanation: 27 ends with 7.**

### **77. Check if number is even using bitwise**

**Input: 10  
 Output: Even  
 Explanation: n & 1 == 0 means even.**

### **78. Check if number is odd using bitwise**

**Input: 9  
 Output: Odd  
 Explanation: n & 1 == 1**

### **79. Count prime digits in a number**

**Input: 2357  
 Output: 4  
 Explanation: Digits 2, 3, 5, 7 are all prime.**

### **80. Print digits in reverse order**

**Input: 1234  
 Output: 4 3 2 1  
 Explanation: Use % 10 to extract and / 10 to reduce.**

## **✅ Programs 81–90**

### **81. Print square of each digit**

**Input: 123  
 Output: 1 4 9  
 Explanation: Square digits individually.**

### **82. Print cube of each digit**

**Input: 123  
 Output: 1 8 27  
 Explanation: Cube digits individually.**

### **83. Find all Armstrong numbers in a range**

**Input: 100–500  
 Output: 153, 370, 371, 407  
 Explanation: Check each number with digit³ sum = number.**

### **84. Print numbers where sum of digits = N**

**Input: N = 4  
 Output: 4, 13, 22, 31, 40  
 Explanation: Brute-force and check.**

### **85. Check if number is palindrome without string**

**Input: 121  
 Output: Palindrome  
 Explanation: Use reverse logic from earlier.**

### **86. Check if number is Armstrong using string**

**Input: 9474  
 Output: Yes  
 Explanation: Use digit string length as power.**

### **87. Print alternate digits of a number**

**Input: 123456  
 Output: 1 3 5  
 Explanation: Traverse index-wise with steps of 2.**

### **88. Find frequency of digit in a number**

**Input: Number = 122334, digit = 3  
 Output: 2  
 Explanation: Loop through digits and count.**

### **89. Find second largest digit in a number**

**Input: 98325  
 Output: 8  
 Explanation: Track largest and second-largest in a loop.**

### **90. Find difference between largest and smallest digit**

**Input: 5382  
 Output: 8 - 2 = 6  
 Explanation: Find max and min.**

## **✅ Programs 91–100**

### **91. Convert number to words (0–999)**

**Input: 123  
 Output: One Hundred Twenty Three  
 Explanation: Use arrays for words.**

### **92. Print number in reverse without storing digits**

**Input: 321  
 Output: 123  
 Explanation: Use reverse logic.**

### **93. Find product of even digits only**

**Input: 1234  
 Output: 2×4 = 8  
 Explanation: Filter and multiply.**

### **94. Find product of odd digits only**

**Input: 1235  
 Output: 1×3×5 = 15  
 Explanation: Filter and multiply.**

### **95. Count zeros in a number**

**Input: 1005  
 Output: 2  
 Explanation: Count digits that are 0.**

### **96. Check if a number is a palindrome using while loop**

**Input: 1331  
 Output: Palindrome  
 Explanation: Reverse and compare.**

### **97. Find difference between sum of even and odd digits**

**Input: 1234  
 Output: (2+4) - (1+3) = 2  
 Explanation: Separate sums and subtract.**

### **98. Convert number to binary using recursion**

**Input: 5  
 Output: 101  
 Explanation: Recursively divide by 2.**

### **99. Sum of digits using recursion**

**Input: 123  
 Output: 6  
 Explanation: sum(n) = n%10 + sum(n/10)**

### **100. Check if a number is palindrome using recursion**

**Input: 121  
 Output: Palindrome  
 Explanation: Compare first and last recursive**

**Patterns:-**

**1)write a program to print below pattern?**

| **\*** |  |  |
| --- | --- | --- |
|  | **\*** |  |
|  |  | **\*** |

**2)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
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**3)write a program to print below pattern?**

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| --- | --- | --- |
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|  |  | **\*** |

**4)write a program to print below pattern?**

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| --- | --- | --- |
|  |  |  |
| **\*** | **\*** | **\*** |

**5)write a program to print below pattern?**

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| **\*** |  |  |

**6)write a program to print below pattern?**

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**7)write a program to print below pattern?**

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| **\*** | **\*** | **\*** |
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**8)write a program to print below pattern?**

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|  | **\*** |  |
|  | **\*** |  |

**9)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
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| **\*** |  | **\*** |
| **\*** | **\*** | **\*** |

**10)write a program to print below pattern?**

|  |  | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
|  |  | **\*** |  |  |

**11)write a program to print below pattern?**

| **\*** |  |  |
| --- | --- | --- |
| **\*** |  |  |
| **\*** | **\*** | **\*** |

**12)write a program to print below pattern?**

|  |  | **\*** |
| --- | --- | --- |
|  |  | **\*** |
| **\*** | **\*** | **\*** |

**13)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
|  |  | **\*** |
|  |  | **\*** |

**14)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
| **\*** |  |  |
| **\*** |  |  |

**15)write a program to print below pattern?**

| **\*** |  | **\*** |
| --- | --- | --- |
| **\*** |  | **\*** |
| **\*** | **\*** | **\*** |

**16)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
| **\*** |  |  |
| **\*** | **\*** | **\*** |

**17)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
|  |  | **\*** |
| **\*** | **\*** | **\*** |

**18)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
| **\*** |  | **\*** |
| **\*** |  | **\*** |

**19)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
| **\*** | **\*** | **\*** |
| **\*** | **\*** | **\*** |

| **1** |  |  |
| --- | --- | --- |
| **2** | **2** |  |
| **3** | **3** | **3** |

**20)write a program to print below pattern?**

| **\*** |  |  |
| --- | --- | --- |
| **\*** | **\*** |  |
| **\*** | **\*** | **\*** |

| **1** |  |  |
| --- | --- | --- |
| **1** | **2** |  |
| **1** | **2** | **3** |

|  |  | **1** |
| --- | --- | --- |
|  | **2** | **2** |
| **3** | **3** | **3** |

**21)write a program to print below pattern?**

|  |  | **\*** |
| --- | --- | --- |
|  | **\*** | **\*** |
| **\*** | **\*** | **\*** |

|  |  | **1** |
| --- | --- | --- |
|  | **2** | **1** |
| **3** | **2** | **1** |

**22)write a program to print below pattern?**

| **3** | **3** | **3** |
| --- | --- | --- |
|  | **2** | **2** |
|  |  | **1** |

| **\*** | **\*** | **\*** |
| --- | --- | --- |
|  | **\*** | **\*** |
|  |  | **\*** |

| **1** | **2** | **3** |
| --- | --- | --- |
|  | **1** | **2** |
|  |  | **1** |

|  |  | **1** |  |  |
| --- | --- | --- | --- | --- |
|  | **2** | **2** | **2** |  |
| **3** | **3** | **3** | **3** | **3** |

**23)write a program to print below pattern?**

|  |  | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** | **\*** | **\*** |  |
| **\*** | **\*** | **\*** | **\*** | **\*** |

|  |  | **1** |  |  |
| --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** |  |
| **1** | **2** | **3** | **4** | **5** |

| **3** | **3** | **3** | **3** | **3** |
| --- | --- | --- | --- | --- |
|  | **2** | **2** | **2** |  |
|  |  | **1** |  |  |

**24)write a program to print below pattern?**

| **\*** | **\*** | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** | **\*** | **\*** |  |
|  |  | **\*** |  |  |

| **1** | **2** | **3** | **4** | **5** |
| --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** |  |
|  |  | **1** |  |  |

**25)write a program to print below pattern?**

|  |  | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
| **\*** | **\*** | **\*** | **\*** | **\*** |

**26)write a program to print below pattern?**

| **\*** | **\*** | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
|  |  | **\*** |  |  |

**27)write a program to print below pattern?**

|  |  | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
| **\*** |  |  |  | **\*** |

**28)write a program to print below pattern?**

| **\*** |  |  |  | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
|  |  | **\*** |  |  |

**29)write a program to print below pattern?**

|  |  | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
| **\*** |  |  |  | **\*** |
|  | **\*** |  | **\*** |  |
|  |  | **\*** |  |  |

**30)write a program to print below pattern?**

| **\*** |  |  |  | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
|  |  | **\*** |  |  |
|  | **\*** |  | **\*** |  |
| **\*** |  |  |  | **\*** |

**31)write a program to print below pattern?**

|  |  | **A** |  |  |
| --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** |  |
| **A** | **B** | **C** | **D** | **E** |

**32)write a program to print below pattern?**

|  |  | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** | **\*** | **\*** |  |
| **\*** | **\*** | **\*** | **\*** | **\*** |
|  | **\*** | **\*** | **\*** |  |
|  |  | **\*** |  |  |

**33)write a program to print below pattern?**

| **\*** |  |  |
| --- | --- | --- |
| **\*** | **\*** |  |
| **\*** | **\*** | **\*** |
| **\*** | **\*** |  |
| **\*** |  |  |

**34)write a program to print below pattern?**

|  |  | **\*** |
| --- | --- | --- |
|  | **\*** | **\*** |
| **\*** | **\*** | **\*** |
|  | **\*** | **\*** |
|  |  | **\*** |

**35)write a program to print below pattern?**

| **\*** |  |  |  | **\*** |
| --- | --- | --- | --- | --- |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** | **\*** | **\*** | **\*** | **\*** |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** |  |  |  | **\*** |

**36)write a program to print below pattern?**

| **\*** | **\*** | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** |  | **\*** |  | **\*** |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** | **\*** | **\*** | **\*** | **\*** |

**37)write a program to print below pattern?**

| **\*** |  |  |  | **\*** |
| --- | --- | --- | --- | --- |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** |  | **\*** |  | **\*** |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** |  |  |  | **\*** |

**38)write a program to print below pattern?**

| **\*** | **\*** | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** | **\*** | **\*** |  |
|  |  | **\*** |  |  |
|  | **\*** | **\*** | **\*** |  |
| **\*** | **\*** | **\*** | **\*** | **\*** |

**39)write a program to print below pattern?**

| **\*** | **\*** | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
|  |  | **\*** |  |  |
|  | **\*** |  | **\*** |  |
| **\*** | **\*** | **\*** | **\*** | **\*** |

**40)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
| **\*** | **\*** |  |
| **\*** |  |  |
| **\*** | **\*** |  |
| **\*** | **\*** | **\*** |

**41)write a program to print below pattern?**

| **\*** | **\*** | **\*** |
| --- | --- | --- |
|  | **\*** | **\*** |
|  |  | **\*** |
|  | **\*** | **\*** |
| **\*** | **\*** | **\*** |

**42)write a program to print below pattern?**

| **\*** |  |  |  | **\*** |
| --- | --- | --- | --- | --- |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** | **\*** | **\*** | **\*** | **\*** |

**43)write a program to print below pattern?**

| **\*** | **\*** | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** |  |  |  | **\*** |

**44)write a program to print below pattern?**

| **\*** | **\*** | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** |  |  |  | **\*** |
| **\*** | **\*** |  | **\*** | **\*** |
| **\*** | **\*** | **\*** | **\*** | **\*** |

**45)write a program to print below pattern?**

|  |  | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** | **\*** | **\*** |  |
| **\*** | **\*** | **\*** |  |  |

**46)write a program to print below pattern?**

|  |  | **\*** | **\*** | **\*** |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
| **\*** | **\*** | **\*** |  |  |

**47)write a program to print below pattern?**

| **2** | **3** | **4** | **5** |
| --- | --- | --- | --- |
| **3** | **4** | **5** | **6** |
| **4** | **5** | **6** | **7** |

**48)write a program to print below pattern?**

|  |  | **1** |  |  |
| --- | --- | --- | --- | --- |
|  | **1** | **0** | **1** |  |
| **1** | **0** | **1** | **0** | **1** |

**49)write a program to print below pattern?**

|  |  |  |  | **1** |
| --- | --- | --- | --- | --- |
|  |  |  | **1** | **0** |
|  |  | **1** | **0** | **1** |

**50)write a program to print below pattern?**

| **1** |  |  |
| --- | --- | --- |
| **0** | **1** |  |
| **1** | **0** | **1** |
| **0** | **1** |  |
| **1** |  |  |

**51)write a program to print below pattern?**

|  |  | **1** |
| --- | --- | --- |
|  | **1** | **0** |
| **1** | **0** | **1** |
|  | **1** | **0** |
|  |  | **1** |

**52)write a program to print below pattern?**

| **2** | **3** | **4** | **5** | **6** |
| --- | --- | --- | --- | --- |
| **6** | **8** | **10** | **12** | **14** |
| **12** | **15** | **18** | **21** | **24** |

**53)write a program to print below pattern?**

| **\*** | **\*** | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** | **\*** | **\*** |  |
|  |  | **\*** | **\*** | **\*** |

**54)write a program to pr int below pattern?**

| **\*** | **\*** | **\*** |  |  |
| --- | --- | --- | --- | --- |
|  | **\*** |  | **\*** |  |
|  |  | **\*** | **\*** | **\*** |

**55)write a program to print below pattern?**

| **4** |  |  |  |  |
| --- | --- | --- | --- | --- |
| **3** | **4** |  |  |  |
| **2** | **3** | **4** |  |  |
| **1** | **2** | **3** | **4** |  |

**Array Programs:-**

**1)write a java program to add the elements from an given array.**

**2)write a java program to print the even elements from an given array.**

**3)write a java program to print the odd elements from an given array.**

**4)write a java program to add the even elements from an given array.**

**5)write a java program to add the odd elements from an given array.**

**6)write a java program to count the elements from an given array.**

**7)write a java program to count the elements from an given array without using length variable.**

**8)write a java program to count the even elements from an given array.**

**9)write a java program to count the odd elements from an given array.**

**10)write a java program to reverse the elements from an given array.**

**11)write a java program to copy the elements from one array to another array.**

**12) write a java program to find minimum number in an given array.**

**13)write a java program to find second minimum number in an given array.**

**14)write a java to find largest element in an given array.**

**15)write a java to find second largest element in an given array.**

**16)write a java program to print duplicate elements in an given array.**

**17)write a java program to remove elements based on the index in an given array.**

**18)write a java program to add elements based on the index in an given array.**

**19)write a java program to check Given array elements are identical elements are not.**

**20)write a java program to check given elements are monotonique or not.**

**21)write a java program to Rotate elements in an given array.**

**22)write a java program to segregate elements in an given array.**

**23)write a java program to segregate even and odd elements in an given array.**

**24)write a java program to segregate based on positive and negative elements in an given array.**

**25) write a java program to print Missing elements in an given array.**

**26)write a java program to print possible subarray elements in an given array.**

**27)BubbleSort.**

**28)InsertionSort.**

**29)SelectionSort.**

**30)LinearSearch.**

**31)BinarySearch.**

**32)write a java program to print Missing elements in an given array.**

**33)Write a Java program to calculate the average value of array elements.**

**34) Write a Java program to separate 0s and 1s in an array of 0s and 1s into left and right sides.**

**35)Write a Java program to cyclically rotate a given array clockwise by one.**

**36)Write a Java program to arrange the elements of an array of integers so that all negative integers appear before all positive integers.**

**2-D Array Programms:-**

**1)write a java 2D program to find minimum value from an given array.**

**2)write a java 2D program to find maximum value from an given array.**

**3)write a java 2D program to add sum of diagonal array from an given array.**

**4)write a java 2D program to add sum of each column from an given array.**

**5)write a java 2D program to add sum of each row from an given array.**

**6)write a java 2D program to add sum of mid row only from an given array.**

**7)write a java 2D program to swap the array elements from an given array.**

**8)write a java 2D program to find identity matrix from an given array.**

**9)write a java 2D program to add/sum of primary diagonal from an given array.**

**10)write a java 2D program to add/sum of secondary diagonal from an given array.**

**11)write a java 2D program to print spiral matrix based on the user input.**

**12)write a java 2D program to add/sum of diagonal from an given array.**

**String Programs:-**

**1)write a java program to convert lowercase characters to uppercase characters from given string.**

**2)write a java program to convert lowercase characters to uppercase characters without using inbuilt method.**

**3)write a java program to print reverse of an given string.**

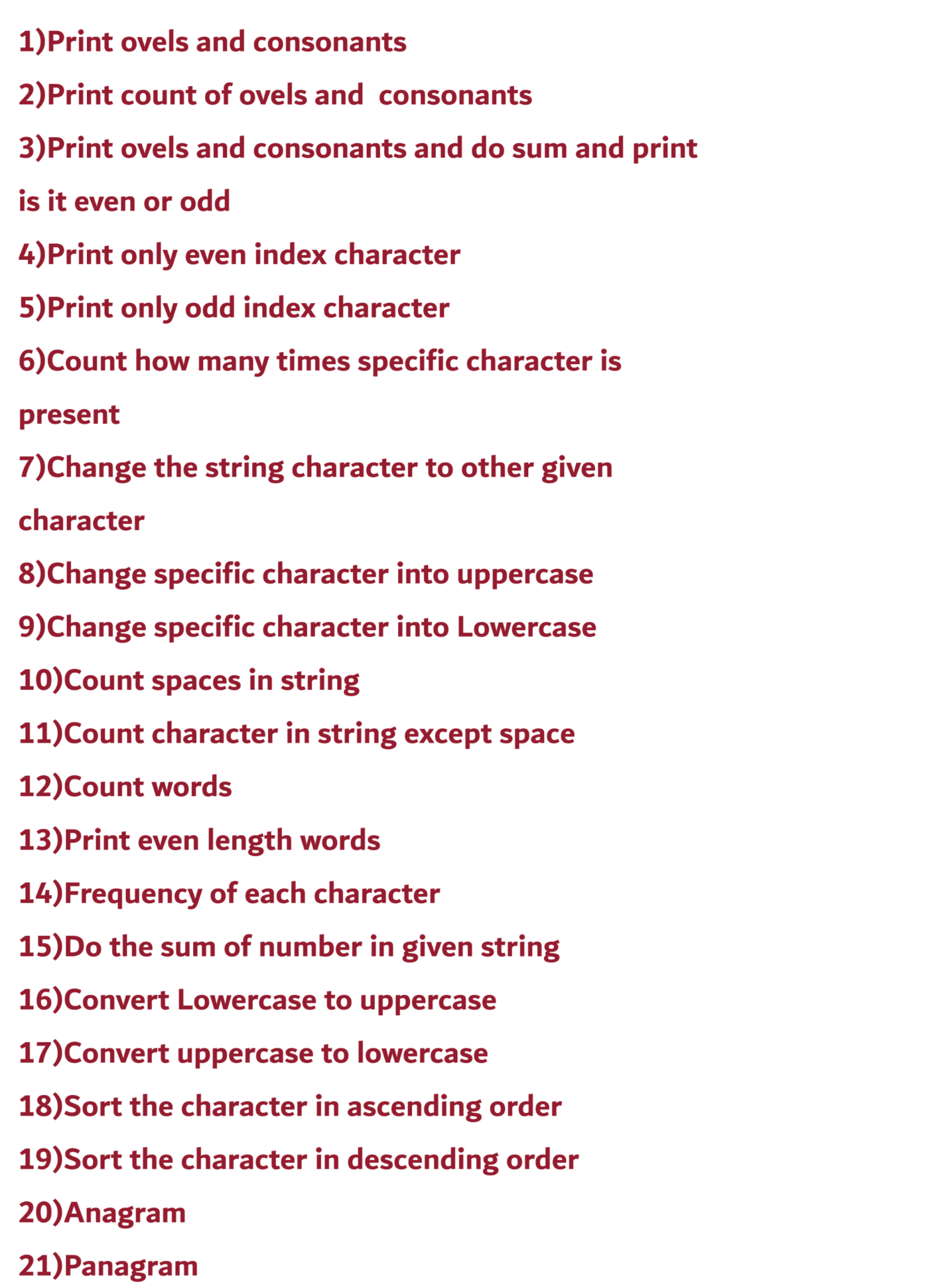
**4) write a java program to print vowels in an given string.**

**5)write a java program to print numbers in an given string.**

**6) write a java program to print duplicate character in given String.**

**7)write a java program to count duplicate character in given String.**

**8)write a java program to do sum ex:-j1a3v4a output:- 8.**

****

**22)print each of the character in separate line.**

**23)print ASCII code of each character of a String.**

**24)print only uppercase character in string.**

**25)print only lowercase characteristics of String.**

**26)print only digits characteristics of String.**

**27)print only alphabets characteristics of String.**

**28)count only uppercase characteristics of String.**

**29) count only lowercase characteristics of String.**

**30)count only uppercase,Lowercase characteristics of String.**

**31)create a new String containing only uppercase character.**

**32) create a new String containing first digits and then character.**

**33)create a new String containing first uppercase then remaining character of String.**

**34)create a new String after removing all spaces in a String.**

**35)write a program to reverse the case of a String.**

**36)write a program to find if a String is polindrome.**

**37)print each world of a sentence in separated line.**

**38)print first character of each word in a sentence.**

**39)print first 2 characters of each word in a sentence.**

**40)print only the word starting with R in a sentence.**

**41)print words ending with ED in a sentence.**

**42)print only the words containing E in a sentence.**

**43)print only words having 3 characters in a sentence.**

**44)find the longest word in a sentence.**

**45)find if the word OR existing in a String.**

**46)count the number of words in a sentence.**

**47)count the number of words ending with D in a sentence.**

**48)change RED with BLUE in a sentence and print it.**

**49)Delete the word RED in a sentence and print it.**

**50)Take a sentence and change case of each alternate word.**

**51)write a program to capitalize each word of a sentence.**

**52)write a program to swap first and last letter of each word of a sentence.**