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| **Tasks with numbers** | **Tasks with strings** |
| 1. **Comparing numbers** (if-else) Write a program that checks whether a number is positive, negative or zero. 2. **Even or odd number** (if-else) The program should check whether the entered number is even or odd. 3. **The multiplication table** (for loop) Write a program that outputs the multiplication table for a number entered by the user using a for loop. 4. **Finding the minimum number** (if-else) Write a program that reads two numbers from the user and outputs the smaller of the two.   5.  Square numbers (for loop)  Write a program that calculates and outputs the square numbers from 1 to 10.  6.  Calculating the factorial (for loop, recursion)  Write a program that calculates the factorial of a number entered by the user. 7.  Sum of first N numbers (for loop)  Write a program that calculates the sum of the first n natural numbers, where n is entered by the user.  8.  Reverse number (while loop, modulo)  Write a program that reads a number and outputs the digits in reverse order.  9.  Leap year check (if-else)  Write a program that checks whether a year is a leap year or not.  10.  Prime number check (for loop, if-else)  Write a program that checks whether an entered number is a prime number.  11.  Sum of even numbers (for loop, if condition)  Write a program that calculates the sum of all even numbers from 1 to a number entered by the user.  12.  Counting vowels (for loop, if condition, strings)  Write a program that counts the number of vowels in a word entered by the user.  13.  Printing a series of numbers (while loop)  Write a program that prints a series of numbers from 1 to the number entered by the user using a while loop.  14.  Fibonacci sequence (for loop)  Write a program that calculates the first n numbers of the Fibonacci sequence, where n is entered by the user.  15.  Multiplication table (for loop)  Write a program that prints the multiplication table up to 10 for an entered number.  16.  Largest of three numbers (if-else)  Write a program that finds the largest of three entered numbers.  17.  Rectangle of stars (for loops)  Write a program that prints a rectangle of stars (\*) based on the height and width entered by the user.  18.  Factory Calculation Using Recursion (Recursion) Write a program that calculates the factorial of a number using a recursive method.  19.  Checking palindromes (if condition, strings)  Write a program that checks whether a word entered by the user is a palindrome.  20.  Guessing numbers (random number, if-else, loops)  Write a program that generates a random number, and the user has to guess it.  21.  Greatest common divisor (GCD) (while loop, modulo)  Write a program that calculates the greatest common divisor of two entered numbers.  22.  Least common multiple (LCM) (for loop, if condition)  Write a program that calculates the least common multiple of two entered numbers.  23.  Sorting numbers (if-else, variable swapping)  Write a program that sorts three entered numbers in ascending order.  24.  Calculating compound interest (mathematical calculations, loops)  Write a program that calculates the compound interest on an invested capital. The variables: initial capital, interest rate and term are entered by the user.  25.  Calculating the average (for loop, arrays)  Write a program that calculates the average of n numbers entered.  26.  Rolling the dice (random numbers, if condition)  Write a program that simulates a random number between 1 and 6, like rolling the dice.  27.  Character counting (strings, for loop)  Write a program that counts the number of characters in a sentence entered by the user.  28.  Reversing a sequence of numbers (arrays, loops)  Write a program that reverses a sequence of numbers entered by the user. 29.  Converting Roman Numerals (if-conditioned, strings)  Write a program that converts a number into a Roman numeral.  30.  Temperature Conversion (if-else, Mathematical Calculations)  Write a program that converts temperatures from Celsius to Fahrenheit and vice versa based on the user's choice. | 1.  Count word length (strings, loops) Write a program that calculates the length of a word entered by the user.  2.  Convert characters (strings, if condition) Write a program that converts every lowercase letter to uppercase and vice versa.  3.  Separate words (strings, arrays) Write a program that reads a sentence from the user and outputs each word on a new line.  4.  Output words backwards (strings, loops) Write a program that outputs an entered word backwards.  5.  Replace placeholders (strings, replace()) Write a program that replaces certain placeholders in a text (e.g. "[name]") with values ​​entered by the user.  6.  Counting certain words (strings, for loop) Write a program that counts the number of a certain word in a text.  7.  Convert sentence to Pig Latin (strings, loops) Write a program that converts a sentence into the fantasy language "Pig Latin".  8.  Check anagrams (strings, arrays) Write a program that checks whether two entered words are anagrams.  9.  Remove vowels (strings, if condition) Write a program that removes all vowels from a sentence.  10.  Initials of a name (strings, arrays) Write a program that outputs the initials of an entered name.  11.  Choose random words (arrays, random numbers) Write a program that randomly selects a word from a list entered by the user.  12.  Find palindromes in a text (strings, loops) Write a program that recognizes all palindromes in a text.  13.  Sort words alphabetically (strings, arrays, sort()) Write a program that sorts words from a sentence alphabetically.  14.  Words with a certain length (strings, loops) Write a program that outputs all words in a sentence with a certain length.  15.  Count most common letters (strings, arrays) Write a program that finds the most common letter in a text.  16.  Word with the most letters (strings, loops) Write a program that finds the longest word in a sentence.  17.  Detecting plagiarism (strings, loops, arrays) Write a program that compares two texts to detect plagiarism.  18.  Word game: Hangman (strings, loops, if conditions) Develop a simple word game where the user has to guess a word.  19.  Add line break (strings, loops) Write a program that inserts line breaks in a text after a certain number of characters.  20.  Analyze sentence (strings, loops) Write a program that analyzes a sentence and outputs the number of words, letters and sentences.  21.  Remove special characters (strings, replace()) Write a program that removes all special characters from a text.  22.  Recognizing abbreviations (strings, arrays) Write a program that recognizes and counts abbreviations such as "Dr." or "e.g." in a text.  23.  Finding word beginnings (strings, loops) Write a program that extracts all words that begin with a certain letter from a text.  24.  Removing HTML tags (strings, replace()) Write a program that removes all HTML tags from a text.  25.  Text replacement in sentences (strings, replace()) Write a program that replaces one word in a sentence with another.  26.  Generating puzzles (strings, arrays, random numbers) Develop a program that creates simple word puzzles for the user.  27.  Finding synonyms (arrays, strings) Write a program that outputs synonyms for an entered word (use static lists).  28.  Encrypting letters (strings, loops) Write a program that encrypts a text with a simple letter shift (e.g. Caesar encryption).  29.  Comparing word length (strings, if condition) Write a program that compares two words and outputs the longer one.  30.  Removing multiple spaces (strings, replaceAll()) Write a program that replaces all double spaces in a sentence with a single one. |