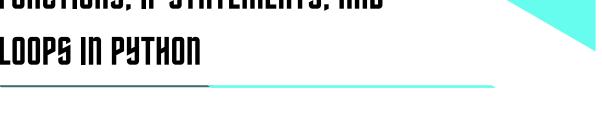
FUNCTIONS, IF STATEMENTS, AND LOOPS IN PYTHON

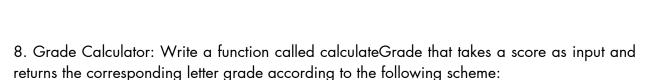


Here's a set of programming exercises involving functions, if statements and loops that you can solve:

- 1. Even or Odd: Write a function called evenOrOdd that takes an integer as input and returns "Even" if the number is even, and "Odd" if the number is odd.
- 2. Maximum of Two Numbers: Write a function called maxOfTwo that takes two numbers as input and returns the maximum of the two.
- 3. Leap Year Checker: Write a function called isLeapYear that takes a year as input and returns True if it is a leap year, and False otherwise. (A leap year is divisible by 4, but not by 100 unless it is also divisible by 400).
- 4. Factorial Calculator: Write a function called factorial that takes an integer as input and returns its factorial. The factorial of a number n is the product of all positive integers less than or equal to n.
- 5. Greatest Common Divisor (GCD): Write a function called gcd that takes two positive integers as input and returns their greatest common divisor.
- 6. Absolute Value: Write a function called absoluteValue that takes a number as input and returns its absolute value without using the built-in abs() function.
- 7. Temperature Converter: Write a function called convertTemperature that takes a temperature in Celsius as input and returns it converted to Fahrenheit. The conversion formula is: Fahrenheit = (Celsius * 9/5) + 32.



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- 90-100: A - 80-89: B - 70-79: C

- 60-69: D

- Below 60: F

- 9. Sum of Squares with Loop: Write a function called sumOfSquares that takes a positive integer n as input and calculates the sum of the squares of all positive integers up to n using a loop. The function should return the resulting sum.
- 10. Quadratic Equation Solver: Write a function called solveQuadratic that takes three numbers (a, b, c) as input, representing the coefficients of a quadratic equation $ax^2 + bx + c = 0$, and returns the solutions as a tuple. If the equation has no real roots, return None.

Feel free to try solving these exercises, and let me know if you need any further assistance or solutions!



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Want to Become a Python Expert?

If you're serious about learning Python and getting ready for Data Analysis or Web Development roles using Python, I highly encourage you to enroll in my Complete Python Course. Don't waste your time following disconnected, outdated tutorials.

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- · Watch it online or download and watch it offline
- One-on-one training with me 2-4 times a week

Sincerely,

Juma Shafara

Data Scientist, Coding Instructor



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