

# Practical Exercise: if + Boolean + string + input

## Exercise 1

In this exercise, you will have the opportunity to practice using conditional statements in Python to make decisions based on different conditions. Conditional statements allow your programs to perform different actions depending on the values of certain variables. You have already learned about the if, if-else, and if-elif-else statements, which are powerful tools for controlling the flow of your code.

### Instructions:

Write a Python program that implements a simple grading system based on a student's score in an exam. The program should take the student's score as input and provide them with a corresponding letter grade according to the following criteria:

- A: 90-100
- B: 80-89
- C: 70-79
- D: 60-69
- F: 0-59

Follow these steps to complete the exercise:

- *Input:* Prompt the user to enter their exam score using the `input()` function. Remember to convert the input to an integer using the `int()` function.
- *Conditional Statements:* Use the if-elif-else statement to determine the appropriate letter grade based on the input score. Construct your conditions to cover the different score ranges mentioned above.
- *Output:* Print out the student's score along with the corresponding letter grade.
- *Testing:* Test your program with different input values to ensure it produces accurate results for various scores.

## Exercise 2

In this exercise, you will have the opportunity to build a simple calculator program in Python that performs basic calculations based on user inputs. The program will take three inputs from the user: two numbers and an operation. It will then carry out the specified operation on the numbers and display the result. This exercise will help you practice using conditional statements to control program flow and perform different calculations.

**Instructions:**

Create a Python program that follows these steps:

- *Input:* Prompt the user to enter two numbers (num1 and num2) and the desired operation (operation). Use the input() function to receive these values from the user. Remember to convert the input numbers to integers using the int() function.
- *Conditional Statements:* Implement a series of conditional statements (if, elif, and else) to determine the correct operation based on the user's input. Here are the operation cases to handle:
  - If the operation is "add", perform the addition operation (num1 + num2).
  - If the operation is "subt", perform the subtraction operation (num1 - num2).
  - If the operation is "mult", perform the multiplication operation (num1 \* num2).
  - If the operation is "div", perform the division operation (num1 / num2).
  - If the operation is anything other than these four, print "Invalid operation" as an error message.
- *Output:* If the operation was valid, display the result of the calculation to the user.
- *Testing:* Test your program with different input combinations to ensure it produces accurate results for various operations.