

Eligibility for Scholarship:

Write a Python program that takes a student's grade and checks if they are eligible for a scholarship. The scholarship criteria are:

Grade must be at least 85.

If the grade is between 85 and 90, the scholarship is partial.

If the grade is above 90, the scholarship is full.

Determining Traffic Light Color:

Write a Python program that simulates a traffic light system. Given a color input ('red', 'yellow', 'green'), print the appropriate message:

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'red': "Stop"  
'yellow': "Get ready"  
'green': "Go"
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If the color is invalid, print "Invalid color".

Check Triangle Validity:

Write a Python program that checks if three sides can form a valid triangle. The sides of a triangle must satisfy the condition that the sum of the lengths of any two sides must be greater than the length of the third side.

Discount Calculation:

Write a Python program that takes the original price of an item and checks if the customer is eligible for a discount.

If the price is above \$1000, apply a 10% discount.

If the price is between \$500 and \$1000, apply a 5% discount.

If the price is below \$500, no discount is applied.

Number Divisibility Check:

Write a Python program that takes a number and checks if it is divisible by 3, 5, or both:

If divisible by both, print "Divisible by 3 and 5".

If divisible by 3 only, print "Divisible by 3".

If divisible by 5 only, print "Divisible by 5".

Otherwise, print "Not divisible by 3 or 5".

Login Attempts:

Write a Python program that allows a user to try logging in with a username and password. The system should allow a maximum of 3 login attempts. After 3 failed attempts, print "Account Locked".

Discount Eligibility for Senior Citizens:

Write a Python program that checks if a person is eligible for a senior citizen discount. The program should ask for the person's age and apply a 20% discount if the person is 60 or older. Otherwise, print "No discount".

Check Leap Year (Updated Criteria):

Write a Python program that checks if a given year is a leap year using the modern leap year rules:

A year is a leap year if it is divisible by 4 but not by 100, unless it is divisible by 400.

Salary Calculation:

Write a Python program that calculates an employee's salary after tax based on the following criteria:

If the salary is more than \$5000, tax is 15%.

If the salary is between \$2000 and \$5000, tax is 10%.

If the salary is less than \$2000, no tax is applied.

Grade Classification:

Write a Python program that takes a student's score as input and classifies the grade as:

"Excellent" if the score is 85 or above.

"Good" if the score is between 60 and 84.
"Needs Improvement" if the score is below 60.

Write a Python program that takes a user's age as input and prints whether they are eligible to vote (18 or older) or not.

Nested If Example:

Write a Python program that checks whether a given year is a leap year or not.
(Hint: A year is a leap year if it is divisible by 4 but not by 100, unless it is divisible by 400.)

Write a Python program to determine if a student passes or fails based on their score. A student needs to score 50 or above to pass. If the student scores 75 or above, print "Excellent", otherwise print "Good". If the score is below 50, print "Fail".

Age Category:

Write a Python program that takes an age as input and categorizes the person into one of the following groups:

"Child" (0-12 years),
"Teenager" (13-19 years),
"Adult" (20-59 years),
"Senior" (60 and above).

Checking Prime Number:

Write a Python program that checks if a given number is prime or not. (A prime number is a number greater than 1 that has no divisors other than 1 and itself.)

Find Maximum of Three Numbers:

Write a Python program that takes three numbers as input and prints the largest number among them.

Even or Odd:

Write a Python program that takes a number as input and prints whether the number is even or odd.

Grade Evaluation:

Write a Python program that takes a student's marks as input and prints the grade based on the following scale:

90 or above: "A"

75-89: "B"

50-74: "C"

Below 50: "F"

Discount Eligibility:

Write a Python program that takes a customer's total purchase amount and checks if the customer is eligible for a discount. A discount is provided if the total purchase exceeds \$100. If eligible, the program should print "You have a discount", otherwise "No discount".

Login Validation:

Write a Python program that simulates a login system. The program should prompt the user for a username and password. If both the username and password are correct, print "Login successful", otherwise print "Invalid username or password".