

Q1 Write a program that takes an integer input from the user and checks whether the number is odd or even.

Q2 Write a program that takes three numbers as input and prints the largest of the three.

Q3 Write a program to check if a given year is a leap year. A leap year is divisible by 4 but not by 100 unless it is also divisible by 400.

Q4 Write a program that takes a percentage (integer) as input and prints the corresponding grade based on the following criteria:

>= 90: Grade A

>= 80: Grade B

>= 70: Grade C

>= 60: Grade D

< 60: Grade F

Q5 Write a program that checks if a given letter is a vowel (a, e, i, o, u) or a consonant.

Q6 Write a basic calculator program that takes two numbers and an operator (+, -, \*, /) as input and performs the specified operation. Print the result based on the operation.

Q7 Write a program that takes a number as input and checks whether it is positive, negative, or zero.

Q8 Write a program that checks if a username and password entered by the user match the pre-set values username = "admin" and password = "1234". If both match, print "Login Successful", otherwise print "Login Failed".

Q9 Write a program that takes three sides of a triangle as input and checks if those sides form a valid triangle. A triangle is valid if the sum of any two sides is greater than the third side.

Check conditions like  $a + b > c$ ,  $b + c > a$ , and  $a + c > b$ .

Q10 Write a program that calculates the Body Mass Index (BMI) based on user input for weight (in kilograms) and height (in meters). Then categorize the BMI into:

Underweight ( $BMI < 18.5$ )

Normal weight ( $18.5 \leq BMI < 24.9$ )

Overweight ( $25 \leq BMI < 29.9$ )

Obesity ( $BMI \geq 30$ )

Use the formula:  $BMI = \text{weight} / (\text{height} ** 2)$

Q11 Write a program that calculates the discount for a product based on its price:

If price is greater than 1000, discount is 10%

If price is between 500 and 1000, discount is 5%

Otherwise, no discount

Print the final price after applying the discount.

Q12 Write a program that takes the name of a month as input and prints the number of days in that month. Consider leap years for February.

Q13 Write a program that simulates a simple ATM. The user should be able to:

Check balance

Deposit money

Withdraw money (ensure the balance doesn't go negative) Use an if-else structure to handle the user's

choices.

Q14 Write a program that categorizes a given age into different groups:

Infant (0-1 year)  
Toddler (2-4 years)  
Child (5-12 years)  
Teenager (13-19 years)  
Adult (20-59 years)  
Senior (60 years and above)

Q15 Write a program that takes an integer (1-7) as input and prints the corresponding day of the week (1 for Monday, 2 for Tuesday, etc.).