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PYTHON PROGRAMMING

**LAB-4 ANSWERS**

1. Python program to check leap year.

**Code:**

year = int(input("Enter a year: ")) # Taking input(Year)from user.

if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):#checking the condition whether the given year is leap year or not.

    print(year, "is a leap year.") # prints if the given year is leap. year.

else:

    print(year, "is not a leap year.")# prints if the given is not a leap year.

**Outputs:**

Enter a year: 2024

2024 is a leap year.

Enter a year: 1998

1998 is not a leap year.2. Python Program to Find the Largest Among Three Number.

Code:

num1 = float(input("Enter first number: ")) # Take the input(num1)from user.

num2 = float(input("Enter second number: ")) # Take the input(num2)from user.

num3 = float(input("Enter third number: ")) # Take the input(num3)from user.

if num1 >= num2 and num1 >= num3:# Compare the numbers to find the largest one

    largest = num1  #print if num1 is greater.

elif num2 >= num1 and num2 >= num3:

    largest = num2 #print if num2 is greater.

else:

    largest = num3 #print if num3 is greater.

# Print the largest number

print("The largest number among", num1, ",", num2, ", and", num3, " greater number 2is", largest) # Print the largest number.

**Output:**

Enter first number: 30

Enter second number: 60

Enter third number: 20

The largest number among 30.0 , 60.0 , and 20.0 greater number 2is 60.0

3.Python Program to Check if a Number is Positive, Negative or 0.

**Code**

num = float(input("Enter a number: "))# Taking the input(num)from user.

# Check if the number is positive, negative, or zero

if num > 0:

    print("The number entered is positive.") #prints when num is positive.

elif num < 0:

    print("The number entered is negative.") #prints when num is Negative.

else:

    print("The number entered is zero.") #prints when num is zero.

**Outputs:**

Enter a number: 4

The number entered is positive.

Enter a number: -3

The number entered is negative.

Enter a number: 0

The number entered is zero.

4. A toy vendor supplies three types of toys: Battery Based Toys, Key-based Toys, and Electrical Charging Based Toys. The vendor gives a discount of 10% on orders for battery-based toys if the order is for more than Rs. 1000. On orders of more than Rs. 100 for key-based toys, a discount of 5% is given, and a discount of 10% is given on orders for electrical charging based toys of value more than Rs. 500. Assume that the numeric codes 1,2 and 3 are used for battery based toys, key-based toys, and electrical charging based toys respectively. Write a program that reads the product code and the order amount and prints out the net amount that the customer is required to pay after the discount.

Code:

# Input product type and original amount

product = int(input("Enter product Type: "))  # Entering product type

o\_amount = int(input("Enter amount in Rs: "))  # Entering amount

# Calculate discount based on product type and original amount

discount = 0

if product == 1 and o\_amount > 1000:  # Battery toy and amount greater than 1000

    discount = 0.1 \* o\_amount  # 10% discount

elif product == 2 and o\_amount > 100:  # Key-based toy and amount greater than 100

    discount = 0.05 \* o\_amount  # 5% discount

elif product == 3 and o\_amount > 500:  # Electrical charge-based toy and amount greater than 500

    discount = 0.1 \* o\_amount  # 10% discount

# Calculate net amount after discount

net\_amount = o\_amount - discount

# Display the net amount

print("Net amount after the discount is Rs.", net\_amount) # print the discount.

Output:

Enter product Type: 30

Enter amount in Rs: 20

Net amount after the discount is Rs. 20