



PYTHON PROGRAMMING

LAB-4 ANSWERS

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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