Q1. Python program to check leap year

```
# Take input from the user
year = int(input("Enter a year: "))

# Check if the year is a leap year
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
 print(year, "is a leap year.")
else:
print(year, "is not a leap year.")
```

OUTPUT: Enter a year: 2024 2024 is a leap year.

Q2. Python Program to Find the Largest Among Three Numbers

```
# Take input from the user for three numbers
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))
num3 = float(input("Enter the third number: "))

# Find the largest number
if num1 >= num2 and num1 >= num3:
largest = num1
elif num2 >= num1 and num2 >= num3:
largest = num2
else:
largest = num3

# Print the result
print("The largest number is:", largest)
```

OUTPUT: Enter the first number: 56 Enter the second number: 90 Enter the third number: 7899 The largest number is: 7899.0

Q3. Python Program to Check if a Number is Positive, Negative or 0

```
# Function to check and return the status of a number
def check_number(number):
if number > 0:
return "positive"
elif number < 0:
return "negative"
else:
return "zero"

# Take input from the user for three numbers
 number1 = float(input("Enter the first number: "))
 number2 = float(input("Enter the second number: "))
number3 = float(input("Enter the third number: "))

# Check and print the result for each number
print(f"The first number is {check_number(number1)}.")
print(f"The second number is {check_number(number2)}.")
 print(f"The third number is {check_number(number3)}.")
```

OUTPUT:
```
Enter the first number: -67
Enter the second number: 56
Enter the third number: 0
The first number is negative.
The second number is positive.
The third number is zero
```

Q4. 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.

```
 Input: Product code and order amount
product_code = int(input("Enter the product code (1 for Battery
Based Toys, 2 for Key-based Toys, 3 for Electrical Charging Based
order_amount = float(input("Enter the order amount: "))

# Initialize discount to 0
discount = 0

# Check product code and apply discount if applicable
if product_code == 1 and order_amount > 1000:
discount = 0.10 * order_amount
elif product_code == 2 and order_amount > 100:
 discount = 0.05 * order_amount
elif product_code == 3 and order_amount > 500:
discount = 0.10 * order_amount

# Calculate net amount
net_amount = order_amount - discount

# Print the result
print(f"The net amount to be paid after discount is: Rs.
{net_amount:.2f}")
```

OUTPUT: Enter the product code (1 for Battery Based Toys, 2 for Key-based Toys, 3 for Electrical Charging Based Toys): 1
Enter the order amount: 5000
The net amount to be paid after discount is: Rs. 4500.00

5. A transport company charges the fare according to following table:
Distance Charges
1-50 :8 Rs./Km
51-100 :10 Rs./Km
>100: 12 Rs/Km

```
# Input: Distance traveled
distance = float(input("Enter the distance traveled (in Km): "))

# Calculate fare based on the distance
if distance <= 50:
fare = distance * 8
# 8 Rs./Km for 1-50 Km
elif distance <= 100:
fare = (50 * 8) + (distance - 50) * 10
# 8 Rs./Km for first 50 Km, 10 Rs./Km for 51-100 Km
else:
fare = (50 * 8) + (50 * 10) + (distance - 100) * 12
# 8 Rs./Km for first 50 Km, 10 Rs./Km for next 50 Km, 12 Rs./Km for
> 100 K

# Print the fare
print(f"The total fare is: Rs. {fare:.2f}")
```

OUTPUT: Enter the distance traveled (in Km): 45
T8he total fare is: Rs. 360