Lab-4

1.Python program to check leap year.

Program:

```
num1= int(input("Enter the Year:" ))


if (num1 % 4 == 0 and num1 % 100 != 0) or (num1 % 400 == 0):
    print(f"{num1} is a leap year.")
else:
    print(f"{num1} is not a leap year.")
```

Result:

```
Enter the Year:2024
2024 is a leap year.
```

2. Python Program to Find the Largest Among Three Numbers.

Program:

```
num1=int(input("Enter First Number: "))
num2=int(input("Enter Second Number: "))
num3=int(input("Enter third Number: "))
if num1 >num2 and num1 >= num3:
  print(f"{num1} is greter")
elif num2>= num1 and num2>= num3:
  print(f"{num2} is greater")
else:
  print(f"{num3} is  greater")
```

Result:

```
Enter First Number: 33
Enter Second Number: 22
Enter third Number: 55
```

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

Program:

```
num=  int(input("Enter the number: "))

if num > 0:
 print(f"{num} is positive")
elif num < 0:
  print(f"{num} is negative")
else:
  print(f"{num} is 0")
```

Result:

```
Enter the number: -45
-45 is negative
```

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.

Program:

```
  product_code = int(input("Enter the product code : "))

order_amount = float(input("Enter the order amount: "))

# Initialize discount percentage
discount = 0

# Apply discounts based on product code and order amount
if product_code == 1:  # Battery-based Toys
    if order_amount > 1000:
        discount = 10
elif product_code == 2:  # Key-based Toys
    if order_amount > 100:
        discount = 5
```

```
elif product_code == 3:  # Electrical Charging-based Toys
    if order_amount > 500:
        discount = 10
else:
    print("Invalid product code entered.")


# Calculate the discount amount
discount_amount = (discount / 100) * order_amount

# Calculate the net amount to be paid
net_amount = order_amount - discount_amount

# Output the result
print(f"Discount: {discount}%")
print(f"Discount amount: Rs. {discount_amount:.2f}")
print(f"Net amount to be paid: Rs. {net_amount:.2f}")
```

Result:

Enter the product code : 2
Enter the order amount: 150
Discount: 5%
Discount amount: Rs. 7.50
Net amount to be paid: Rs. 142.5

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

Write a python program to calculate the transport distance entered by user.

Program:

```
distance = float(input("Enter the distance (in km): "))


if 1 <= distance <= 50:
    charge_per_km = 8
elif 51 <= distance <= 100:
    charge_per_km = 10
elif distance > 100:
    charge_per_km = 12
else:
    print("Invalid distance entered.")



total_fare = charge_per_km * distance


print(f"Distance: {distance} km")
print(f"Charge per km: Rs. {charge_per_km}")
print(f"Total fare: Rs. {total_fare:.2f}")
```

Result:

```
Enter the distance (in km): 101
Distance: 101.0 km
Charge per km: Rs. 12
Total fare: Rs. 1212.00
```