**LAB–4 CONTROL STATEMENTS**

1. Python program to check leap year.
2. year = int(input("Enter a year: "))
3. if (year % 4 == 0):
4. if (year % 100 == 0):
5. if (year % 400 == 0):
6. print(f"{year} is a leap year.")
7. else:
8. print(f"{year} is not a leap year.")
9. else:
10. print(f"{year} is a leap year.")
11. else:
12. print(f"{year} is not a leap year.")

**Output**

Enter a year: 1990

1990 is not a leap year.

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

num1 = float(input("Enter first number: "))

num2 = float(input("Enter second number: "))

num3 = float(input("Enter third number: "))

if (num1 >= num2) and (num1 >= num3):

    largest = num1

elif (num2 >= num1) and (num2 >= num3):

    largest = num2

else:

    largest = num3

print(f"The largest number is {largest}.")

**Output**

Enter first number: 4.5

Enter second number: 35.6

Enter third number: 3333.665

The largest number is 3333.665.

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

number = float(input("Enter a number: "))

if number > 0:

    print("The number is positive.")

elif number < 0:

    print("The number is negative.")

else:

    print("The number is zero.")

**Output**

Enter a number: -56

The number is negative.

1. 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.

product\_code = int(input("Enter the product code (1 for Battery Based, 2 for Key-based, 3 for Electrical Charging Based): "))

order\_amount = float(input("Enter the order amount: Rs. "))

if product\_code == 1:

    if order\_amount > 1000:

        discount = order\_amount \* 0.10

        net\_amount = order\_amount - discount

    else:

        net\_amount = order\_amount

elif product\_code == 2:

    if order\_amount > 100:

        discount = order\_amount \* 0.05

        net\_amount = order\_amount - discount

    else:

        net\_amount = order\_amount

elif product\_code == 3:

    if order\_amount > 500:

        discount = order\_amount \* 0.10

        net\_amount = order\_amount - discount

    else:

        net\_amount = order\_amount

else:

    print("Invalid product code.")

    net\_amount = None

# Output the net amount

if net\_amount is not None:

    print(f"The net amount to be paid after discount is: Rs. {net\_amount:.2f}")

**Output**

Enter the product code (1 for Battery Based, 2 for Key-based, 3 for Electrical Charging Based): 2

Enter the order amount: Rs. 54564

The net amount to be paid after discount is: Rs. 51835.80

1. 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.

# Input distance traveled

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

# Calculate the fare based on the distance

if distance <= 50:

    fare = distance \* 8  # Rs. 8 per km for 1-50 km

elif distance <= 100:

    fare = (50 \* 8) + ((distance - 50) \* 10)  # Rs. 10 per km for 51-100 km

else:

    fare = (50 \* 8) + (50 \* 10) + ((distance - 100) \* 12)  # Rs. 12 per km for > 100 km

# Output the calculated fare

print(f"The fare for {distance} km is: Rs. {fare:.2f}")

**Output**

Enter the distance traveled (in km): 845

The fare for 845.0 km is: Rs. 9840.00