**Assignment (day 4)**

1. Python program to check leap year

year = int(input("Enter a year: "))

if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):

print(f"{year} is a Leap Year.")

else:

print(f"{year} is not a Leap Year.")

2. Python Program to Find the Largest Among Three Numbers

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

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

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

if num1 >= num2 and num1 >= num3:

print(f"The largest number is {num1}.")

elif num2 >= num1 and num2 >= num3:

print(f"The largest number is {num2}.")

else:

print(f"The largest number is {num3}.")

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

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

if num > 0:

print(f"{num} is a positive number.")

elif num < 0:

print(f"{num} is a negative number.")

else:

print("The number 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.

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

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

discount = 0

if product\_code == 1: # Battery Based Toys

if order\_amount > 1000:

discount = 0.10 # 10% discount

elif product\_code == 2: # Key-based Toys

if order\_amount > 100:

discount = 0.05 # 5% discount

elif product\_code == 3: # Electrical Charging Based Toys

if order\_amount > 500:

discount = 0.10 # 10% discount

discount\_amount = order\_amount \* discount

net\_amount = order\_amount - discount\_amount

if discount > 0:

print(f"A discount of {discount\*100}% is applied.")

print(f"Discount amount: Rs. {discount\_amount:.2f}")

else:

print("No discount applied.")

print(f"Net amount to pay: Rs. {net\_amount:.2f}")

5. A transport company charges the fare according to following table:

Distance Charges

|  |  |
| --- | --- |
| Distance | Charges |
| 1-50 | 8 |
| 51-100 | 10 |
| >100 | 12 |

distance = float(input("Enter the distance in kilometers: "))

if distance >= 1 and distance <= 50:

fare = distance \* 8 # 8 Rs per kilometer

elif distance > 50 and distance <= 100:

fare = distance \* 10 # 10 Rs per kilometer

else:

fare = distance \* 12 # 12 Rs per kilometer

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