In [1]:
```python
# Question 1: Python program to check leap year
year = int(input("Enter a year: "))
# A year is a leap year if it is divisible by 4, but not divisible by 100, unless it is divisible by 400
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.")
```

```
2022 is not a leap year.
```

In [2]:
```python
# Question 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: "))

largest = num1 if num1 > num2 and num1 > num3 else (num2 if num2 > num3 else num3)
print(f"The largest number is {largest}.")
```

```
The largest number is 69.0.
```

In [3]:
```python
# Question 3: 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.")
```

```
The number is negative.
```

In [8]:
```python
# Question 4: Toy Vendor Discount Program
product_code = int(input("Enter the product code (1 for Battery-based, 2 for Key-based, 3 for Electrical charging): "))
order_amount = float(input("Enter the order amount: "))

if product_code == 1:
    if order_amount > 1000:
        discount = 0.10 * order_amount
        net_amount = order_amount - discount
    else:
        net_amount = order_amount
elif product_code == 2:
    if order_amount > 100:
        discount = 0.05 * order_amount
        net_amount = order_amount - discount
    else:
        net_amount = order_amount
elif product_code == 3:
    if order_amount > 500:
        discount = 0.10 * order_amount
        net_amount = order_amount - discount
    else:
        net_amount = order_amount
else:
    print("Invalid product code.")
    net_amount = 0

print(f"The net amount to pay is Rs. {net_amount}.")
```

```
The net amount to pay is Rs. 190.0.
```

In [9]:
```python
# Question 5: Transport Fare Calculation Based on Distance
distance = float(input("Enter the distance (in km): "))

if 1 <= distance <= 50:
    fare = 8 * distance
elif 51 <= distance <= 100:
    fare = 10 * distance
else:
    fare = 12 * distance

print(f"The transport fare is Rs. {fare}.")
```

```
The transport fare is Rs. 40.0.
```

In [ ]: