1)

def is\_leap\_year(year):

if year%4==0:

return True

else: # else/otherwise it is not a leap year

return False

year=int(input("enter a year :") # get the input from the user

if is\_leap\_year(year):

print(year,"is a leap year")

else:

print(year,"is not a leap year")

out put:

enter a year:2022

2022 is not a leap year

2)

num1=int(input("enter the first number:")) # get the input from the user

num2=int(input("enter the second number:"))

num3=int(input("enter the third number:"))

if num1>=num2 and num1>=num3: # compare numbers to find the largest number

largest=num1

elif num2>=num1 and num2>=num3:

largest=num2

else:

largest=num3

print("the largest number among",num1,num2,"and",num3,"is",largest) #print the largest number

OUTPUT:

enter the first number:20

enter the second number:25

enter the third number:80

the largest number among 20 25 and 80 is 80

3)

num=float(input("enter a number:")) #get the number from the user

if num>0: # check if the number is positive or negative

print("the number is positive")

elif num<0:

print("the number is negative")

else:

print("the number is zero")

OUTPUT

enter a number:8

the number is positive

4)

product\_code=int(input("enter the product code(1 for battery based toys,2 for key-based toys,3 for elecrical charging based toy):"))

order\_amount=float(input("enter the order amount:"))

if product\_code==1 and order\_amount>1000:

net\_amount=order\_amount-(order\_amount\*0.1)

elif product\_code==2 and order\_amount>100:

net\_amount=order\_amount-(order\_amount\*0.05)

elif product\_code==3 and order\_amount>500:

net\_amount=order\_amount-(order\_amount\*0.1)

else:

net\_amount=order\_amount

print("The net amount to be paid after the discount is:",net\_amount)

OUTPUT:

enter the product code(1 for battery based toys,2 for key-based toys,3 for elecrical charging based toy):1

enter the order amount:700

The net amount to be paid after the discount is: 700

5)

distance=float(input("enter the distance traveled in kilometers:"))

if distance<=50:

fare=distance\*8

elif distance<=100:

fare=distance\*10

else:

fare=distance\*12

print("the fare for the distance traveled is:",fare,"RS.")

OUTPUT:

enter the distance traveled in kilometers:10

the fare for the distance traveled is: 80.0 RS.