```
# -*- coding: utf-8 -*-
"""
Created on Tue Feb  8 15:34:24 2022

@author: Akaxoxo Sebsatian

    What the code does?
   This code takes customer name,previous and current meter reading of a
   user and then categorised the user as a domestic user, industrial user
   or a commercial user based on the users electricity consumption.

   The code finally displays a message to the user including:
      1. The customer name
      2. Amount of electricity consumed by the customer
      3. Total amount to be paid,with an additional 2% charge

"""



# Getting customer name and meter readings

customerName  = str(input("Name of costomer: ")).capitalize()
previousReading = float(input("Previous meter reading,kwh: "))
currentReading = float(input("Current meter reading,kwh: "))

# passing info to the amountToBePaid function

def amountToBePaid(customerName,previousReading,currentReading):
   # check if current reading is less than the previous reading
   # since that can not happen
   if currentReading < previousReading:
      error_msg = f"Hello {customerName},your current meter reading "
      error_msg = error_msg + "can not be less than the previous meter reading!"

      print(error_msg)

   else:
      # compute amount of electricity consumed
      electricityConsumed = currentReading - previousReading

      # check and categorize customer based on the comsumption
      if electricityConsumed > 200:
         category = "a commercial user"

         if electricityConsumed <= 201:

            # amount to pay for first 201
            amountToPay = 0.9*electricityConsumed
            twoPersent = (2/100)*amountToPay #additional 2%
            totalAmountToBePaid = twoPersent + amountToPay

         else:

            # amount to pay if comsumption is more than 201

            amountToPay = (0.9*201) + 1.5*(electricityConsumed - 201)
            twoPersent = (2/100)*amountToPay  #additional 2%
            totalAmountToBePaid = twoPersent + amountToPay

      elif electricityConsumed > 100:
         category = "an industrial user"
```

```
        if electricityConsumed <= 120:

            # amount to pay for first 120 kwh
            amountToPay = 0.5*electricityConsumed
            twoPersent = (2/100)*amountToPay   #additional 2%
            totalAmountToBePaid = twoPersent + amountToPay

        else:

            # amount to pay if comsumption is more than 120 kwh

            amountToPay = (0.5*120) + 0.75*(electricityConsumed - 120)
            twoPersent = (2/100)*amountToPay   #additional 2%
            totalAmountToBePaid = twoPersent + amountToPay

    else:
        # domestic since all the above conditions faild
        category = "a domestic user"
        if electricityConsumed <= 60:

            # amount to pay for first 60 kwh

            amountToPay = 0.3*electricityConsumed
            twoPersent = (2/100)*amountToPay   #additional 2%
            totalAmountToBePaid = twoPersent + amountToPay

        else:

            # amount to pay if comsumption is more than 60 kwh
            amountToPay = (0.3*60) + 0.5*(electricityConsumed - 60)
            twoPersent = (2/100)*amountToPay    #additional 2%
            totalAmountToBePaid = twoPersent + amountToPay

    # formatting the message display
    msgToCustomer = f"\n Hello {customerName},based on your comsumption,"
    msgToCustomer = msgToCustomer + f"{electricityConsumed}kwh,you've been"
    msgToCustomer = msgToCustomer + f" categorised as {category} and "
    msgToCustomer = msgToCustomer + "you're to pay a total amount of"
    msgToCustomer = msgToCustomer + f" {totalAmountToBePaid:.2f} GHC"

    # dislpay message to user
    print(msgToCustomer)


# calling the amountToBepPaid function to do the needful
amountToBePaid(customerName, previousReading, currentReading)
```