**Assignment : 01**

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| import datetime  prev\_units = 0.00  def calculate\_unit\_price(units\_consumed):  if 0 <= units\_consumed <= 100:  return 13  elif 101 <= units\_consumed <= 200:  return 18  elif 201 <= units\_consumed <= 300:  return 22  elif 301 <= units\_consumed <= 400:  return 25  elif 401 <= units\_consumed <= 500:  return 27  elif 501 <= units\_consumed <= 600:  return 29  elif 601 <= units\_consumed <= 700:  return 30  else:  return 35  def calculate\_gst(total\_cost):  return (total\_cost / 100) \* 17  def calculate\_nj\_surcharge(units\_consumed):  return (units\_consumed / 100) \* 10  def calculate\_fc\_surcharge(units\_consumed):  return (units\_consumed / 100) \* 43  def calculate\_fuel\_adjustment(units\_consumed):  return (units\_consumed / 100) \* 20.22  while True:  user = int(input("Press 1 to continue: "))  if user != 1:  break  customer\_name = input("Enter customer name: ")  units\_consumed = int(input("Enter total number of units consumed: "))  date\_str = input("Enter due date (YYYY-MM-DD): ")  expire\_date\_str = input("Enter due date (YYYY-MM-DD): ")  total\_electricity\_cost = 0.00  tv\_fee = 35.00  unit\_price = calculate\_unit\_price(units\_consumed)  if prev\_units > 300:  print("Previous month units were greater than 300")  unit\_price \*= 25  else:  print("Previous month units were less than 300")  unit\_price = calculate\_unit\_price(units\_consumed)  total\_electricity\_cost = units\_consumed \* unit\_price  gst = calculate\_gst(total\_electricity\_cost)  nj\_surcharge = calculate\_nj\_surcharge(units\_consumed)  fc\_surcharge = calculate\_fc\_surcharge(units\_consumed)  fuel\_adjustment = calculate\_fuel\_adjustment(units\_consumed)  total\_electricity\_cost += tv\_fee + gst + fuel\_adjustment + fc\_surcharge + nj\_surcharge  date = datetime.datetime.strptime(date\_str, "%Y-%m-%d")  expire\_date = datetime.datetime.strptime(expire\_date\_str, "%Y-%m-%d")  if date < expire\_date:  print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*") |  | print("Paying before due date with 0% fine")  result = total\_electricity\_cost  else:  print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")  print("Paying after due date with 2% fine")  result = total\_electricity\_cost  fine = (result / 100) \* 2  result += fine  print("Customer name: ", customer\_name)  print("Units Consumed: ", units\_consumed)  print("TV Fee: ", tv\_fee)  prev\_units = units\_consumed  print("NJ Surcharge: ", nj\_surcharge)  print("FC Surcharge: ", fc\_surcharge)  print("Fuel Adjustment: ", fuel\_adjustment)  print("Total GST: ", gst)  print("Total Bill: ", result) |