

Calculator code

```
# welcome message
print("Welcome to the global energy bill calculator")
# user input
acc_number = int(input("Enter your account number: "))
month_number = int(input("Enter your month number: "))
electricity_plan = input("Enter your electricity plan: ")
electricity_used = float(input("Enter your electricity used: "))
gas_plan = input("Enter your gas plan: ")
gas_used = float(input("Enter your gas used: "))
province = input("Enter your province abbreviation(two letters): ")

# fixed charges
fixed_monthly_fee = 120.62
fixed_gas_monthly_fee = 1.32

# electricity charges
EFIR = 8.36 * 0.01
EFIR_more_than_1000 = 9.41 * 0.01
EFLR = 9.11 * 0.01

# Gas charges
GFIR = 4.56 * 0.01
GFIR_more_than_950 = 5.89 * 0.01
GFLR = 3.93 * 0.01

# Converting to canadian dollars
convert = 0.01

if (province == "AB" or "BC" or "MB" or "NT" or "NU" or "QC" or "SK" or "YT"):
    tax_rate = 1.05
elif (province == "ON"):
    tax_rate = 1.13
elif (province == "NB" or "NL" or "NS" or "PE"):
    tax_rate = 1.15

if electricity_plan == "EFIR":
    if electricity_used <= 1000:
        electricity_bill = electricity_used * EFIR
    else:
        electricity_bill = 1000 * EFIR + ((electricity_used - 1000) *
EFIR_more_than_1000)
elif electricity_plan == "EFLR":
    electricity_bill = electricity_used * EFLR
```

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if gas_plan == "GFIR":
    if gas_used <= 950:
        gas_charge = gas_used * GFIR
    else:
        gas_charge = 950 * GFIR + (gas_used - 950) * GFIR_more_than_950
elif gas_plan == "GFLR":
    gas_charge = gas_used * GFLR

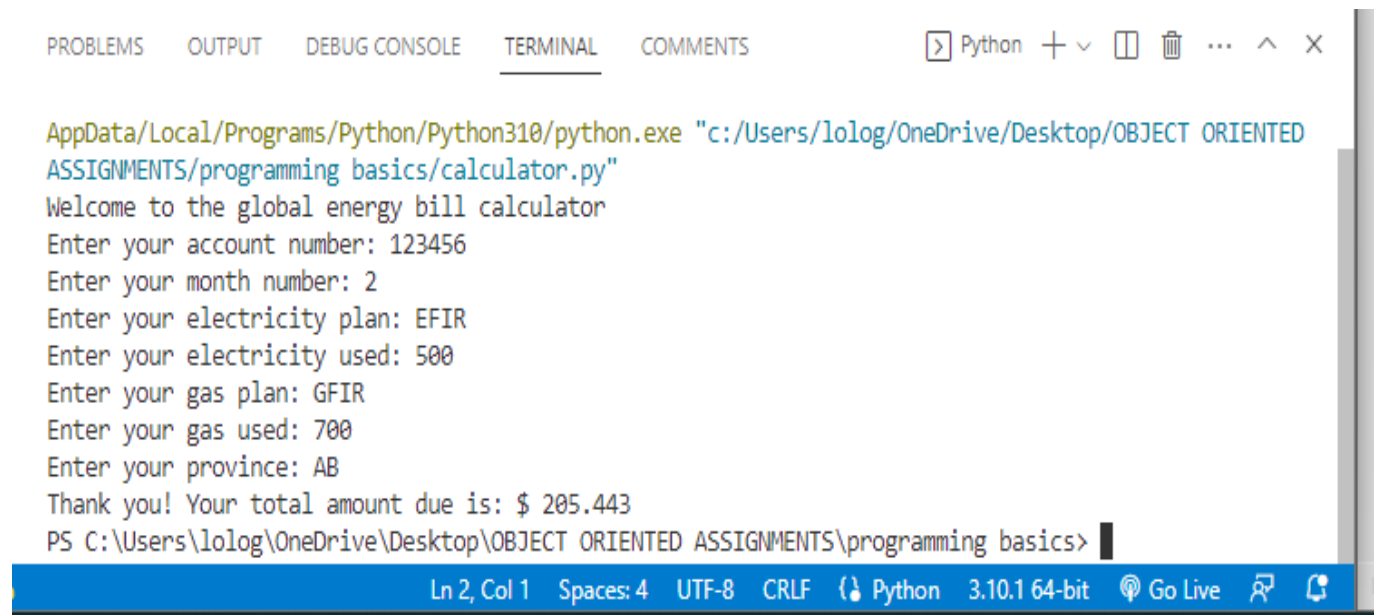
gas_bill = gas_charge + fixed_gas_monthly_fee

total = ((electricity_bill + gas_bill + fixed_monthly_fee) * tax_rate)

print("Thank you! Your total amount due is: $", total)

```

test 1 result screenshot



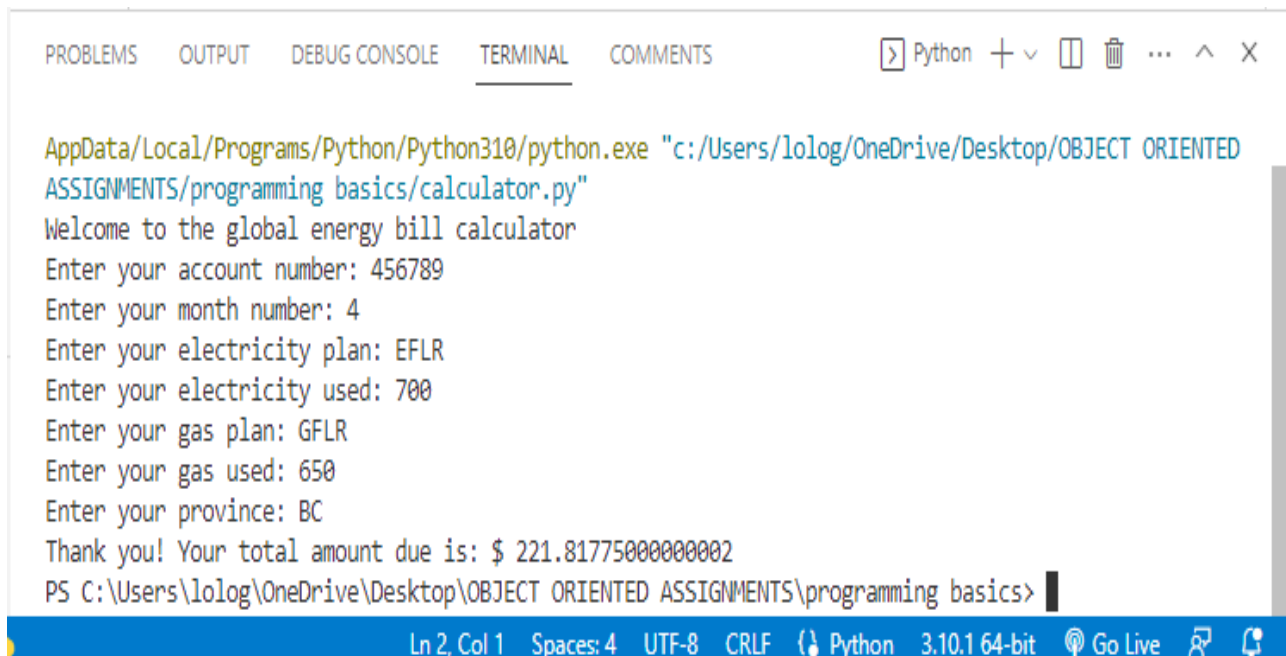
The screenshot shows a Python IDE interface with a terminal window. The terminal displays the output of a program named 'calculator.py'. The program prompts the user for account number, month number, electricity plan, electricity used, gas plan, gas used, and province. The user enters the following values: account number 123456, month number 2, electricity plan EFIR, electricity used 500, gas plan GFIR, gas used 700, and province AB. The program then calculates the total amount due, which is \$ 205.443. The terminal window title is 'Python' and the file path is 'c:/Users/lolog/OneDrive/Desktop/OBJECT ORIENTED ASSIGNMENTS/programming basics/calculator.py'.

```

AppData/Local/Programs/Python/Python310/python.exe "c:/Users/lolog/OneDrive/Desktop/OBJECT ORIENTED
ASSIGNMENTS/programming basics/calculator.py"
Welcome to the global energy bill calculator
Enter your account number: 123456
Enter your month number: 2
Enter your electricity plan: EFIR
Enter your electricity used: 500
Enter your gas plan: GFIR
Enter your gas used: 700
Enter your province: AB
Thank you! Your total amount due is: $ 205.443
PS C:\Users\lolog\OneDrive\Desktop\OBJECT ORIENTED ASSIGNMENTS\programming basics>

```

## Test 2 result screenshot



The screenshot shows a Python terminal window with the following content:

```
AppData/Local/Programs/Python/Python310/python.exe "c:/Users/lolog/OneDrive/Desktop/OBJECT ORIENTED ASSIGNMENTS/programming basics/calculator.py"
Welcome to the global energy bill calculator
Enter your account number: 456789
Enter your month number: 4
Enter your electricity plan: EFLR
Enter your electricity used: 700
Enter your gas plan: GFLR
Enter your gas used: 650
Enter your province: BC
Thank you! Your total amount due is: $ 221.81775000000002
PS C:\Users\lolog\OneDrive\Desktop\OBJECT ORIENTED ASSIGNMENTS\programming basics>
```

The terminal window has a title bar with tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and COMMENTS. The terminal output shows the execution of a Python script that prompts for user input and calculates a total amount due. The status bar at the bottom indicates the current line and column (Ln 2, Col 1), the number of spaces (4), the encoding (UTF-8), the line ending (CRLF), the interpreter (Python 3.10.1 64-bit), and the Go Live button.

test 3

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  COMMENTS  Python + v [ ] [ ] ... ^ X

PS C:\Users\lolog\OneDrive\Desktop\OBJECT ORIENTED ASSIGNMENTS\programming basics> & C:/Users/lolog/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/lolog/OneDrive/Desktop/OBJECT ORIENTED ASSIGNMENTS/programming basics/calculator.py"
Welcome to the global energy bill calculator
Enter your account number: 147852
Enter your month number: 11
Enter your electricity plan: EFIR
Enter your electricity used: 1100
Enter your gas plan: GFLR
Enter your gas used: 1320
Enter your province abbreviation(two letters): NT
Thank you! Your total amount due is: $ 280.1673
PS C:\Users\lolog\OneDrive\Desktop\OBJECT ORIENTED ASSIGNMENTS\programming basics> |
```