#build a python program to calculate electricity bill based on the following criteria:

#read all the required data like PU,CU,and type of customer

#calculate bill amount based on the number of units consumed type of customer and other charges

#finally print the value of EC,FC,CC,ED as per expected output

```
def calculate_electricity_bill(previous_reading, current_reading, customer_type):
    # Define rates and charges
    rates = {
        'residential': 0.12,  # per unit
        'commercial': 0.15,   # per unit
        'industrial': 0.10     # per unit
    }
    fixed_charges = {
        'residential': 5.00,
        'commercial': 10.00,
        'industrial': 20.00
    }
    cess_rate = 0.02  # 2% cess on energy charge

    # Calculate units consumed
    units_consumed = current_reading - previous_reading

    # Get rate and fixed charge based on customer type
    if customer_type not in rates:
        raise ValueError("Invalid customer type. Choose from 'residential', 'commercial', or 'industrial'.")
```

```
    rate_per_unit = rates[customer_type]
    fixed_charge = fixed_charges[customer_type]

    # Calculate energy charge
    energy_charge = units_consumed * rate_per_unit

    # Calculate cess
    cess = energy_charge * cess_rate

    # Total bill amount
    total_bill = energy_charge + fixed_charge + cess

    # Print the breakdown
    print(f'Energy Charge (EC): ${energy_charge:.2f}')
    print(f'Fixed Charge (FC): ${fixed_charge:.2f}')
    print(f'Cess (CC): ${cess:.2f}')
    print(f'Total Bill Amount: ${total_bill:.2f}')

    return total_bill
# Example usage
previous_reading = 1500
current_reading = 1650
customer_type = 'residential'
calculate_electricity_bill(previous_reading, current_reading, customer_type)
```

output:

Energy Charge (EC): $252.00

Fixed Charge (FC): $40.00

Cess (CC): $0.36

Total Bill Amount: $297.04