

I can help you with that. Here's a breakdown of how to create a Java application to generate electricity bills, along with explanations to guide you:

### 1. Create the ElectricityBill Class

```
public class ElectricityBill {
    int consumerNo;
    String consumerName;
    int previousMonthReading;
    int currentMonthReading;
    String connectionType;

    public ElectricityBill(int consumerNo, String consumerName, int
previousMonthReading, int currentMonthReading, String connectionType)
    {
        this.consumerNo = consumerNo;
        this.consumerName = consumerName;
        this.previousMonthReading = previousMonthReading;
        this.currentMonthReading = currentMonthReading;
        this.connectionType = connectionType;
    }

    public double calculateBill() {
        int unitsConsumed = currentMonthReading -
previousMonthReading;
        double billAmount = 0;

        if (connectionType.equalsIgnoreCase("domestic")) {
            if (unitsConsumed <= 100) {
                billAmount = unitsConsumed * 1.0;
            } else if (unitsConsumed <= 200) {
                billAmount = 100 * 1.0 + (unitsConsumed - 100) * 2.50;
            } else if (unitsConsumed <= 500) {
                billAmount = 100 * 1.0 + 100 * 2.50 + (unitsConsumed -
200) * 4.0;
            } else {
                billAmount = 100 * 1.0 + 100 * 2.50 + 300 * 4.0 +
(unitsConsumed - 500) * 6.0;
            }
        } else if (connectionType.equalsIgnoreCase("commercial")) {
            // Implement commercial tariff calculation here
        } else {
            System.out.println("Invalid connection type.");
        }

        return billAmount;
    }

    public void printBill() {
        System.out.println("Consumer No: " + consumerNo);
    }
}
```

```

        System.out.println("Consumer Name: " + consumerName);
        System.out.println("Units Consumed: " + (currentMonthReading -
previousMonthReading));
        System.out.printf("Bill Amount: GH¢%.2f%n", calculateBill());
    }
}

```

## 2. Create the Main Class

```

public class Main {
    public static void main(String[] args) {
        ElectricityBill consumer1 = new ElectricityBill(12345, "John
Doe", 1000, 1250, "domestic");
        consumer1.printBill();

        ElectricityBill consumer2 = new ElectricityBill(67890, "Jane
Smith", 50, 150, "domestic");
        consumer2.printBill();
    }
}

```

## Explanation

- **ElectricityBill Class:**
  - Stores consumer information (number, name, readings, connection type).
  - The calculateBill() method determines the bill amount based on the connection type and units consumed.
  - The printBill() method displays the bill details in a user-friendly format.
- **Main Class:**
  - Creates ElectricityBill objects to represent different consumers.
  - Calls the calculateBill() and printBill() methods to generate and display the bills.

## How to Run

1. Save the code as ElectricityBill.java and Main.java.
2. Compile the code using a Java compiler (like javac):

```

javac ElectricityBill.java
javac Main.java

```

3. Run the Main class:

```

java Main

```

This will output the electricity bill details for the consumers.

## Additional Notes:

- You can expand this application to handle commercial connections by adding a tariff structure for commercial consumers in the calculateBill() method.
- You can add input validation to ensure that the readings and consumer numbers are valid.
- You can store the consumer data in a file or database for persistence.

Let me know if you have any other questions.