**Key Classes and Their Relationships**

**BillingController**

* Exposes API endpoint to calculate the payable amount.
* Uses BillingService.

**BillingService**

* Applies discounts and calculates the final amount.
* Uses BillingUtil for discount validation.
* Calls CurrencyExchangeService for currency conversion.

**BillingUtil**

* Provides utility methods for checking user eligibility for discounts.

**CurrencyExchangeService**

* Fetches real-time exchange rates from a third-party API.
* Converts the amount based on exchange rates.

**Models**

* BillRequest: Contains details of the bill and user.
* BillResponse: Stores the final calculated amount.
* Item: Represents items in the bill.
* UserType: Enum to define user categories (Employee, Affiliate, etc.).
* DiscountType: Enum to define different discount rules.

**Just Info**

**For generating Token Please use below URL**

**localhost:8084/auth/login?username=Abhinesh**

**take token and use with net calculate API.**

**API - localhost:8084/api/calculate**

**Request Body->**

{

  "items": [

    {

      "name": "Java",

      "category": "Appliances",

      "price": 320.0

    },

    {

      "name": "Headphones",

      "category": "Electronics",

      "price": 120.0

    },

    {

      "name": "Sauces",

      "category": "Grocery",

      "price": 200.0

    }

  ],

  "totalAmount": 440.0,

  "userType": "",//Employee

  "customerTenure": 1,

  "originalCurrency": "EUR",

  "targetCurrency": "USD"

}

**Response**

{

    "netPayableAmount": 452.94479999999993,

    "targetCurrency": "USD"

}