Exchange Rate API Documentation
Overview

This application uses Spring Boot and ExchangeRate-API to fetch real-time exchange rates of currencies and perform currency conversions.

Authentication

To use this API, you need an API key from ExchangeRate-API. This key should be included in the `application.properties` file.

Endpoints

1. Get Exchange Rates

Endpoint: `/api/rates`

Method: `GET`

Parameters:

- `base` (optional): The base currency code (default is `USD`).

Example Request:

(http)GET /api/rates?base=EUR

Example Response:

(Json)

{

  "USD": 1.234,

  "GBP": 0.876,

  ...

}

2. Convert Currency

Endpoint: `/api/convert`

Method: POST

Request Body**:**

(Json)

```json
{

  "from": "USD",

  "to": "EUR",

  "amount": 100

}
```

Example Response:

```json
{

  "from": "USD",

  "to": "EUR",

  "amount": 100,

  "convertedAmount": 82.34

}
```

Request/Response Formats

Get Exchange Rates

- Request Parameters: Base currency code (`base`), default is USD.
- Response: A JSON object containing key-value pairs of currency codes and their corresponding exchange rates.

Convert Currency

- Request Body: JSON object with `from` currency code, `to` currency code, and `amount` to be converted.
- Response: JSON object containing the original amount, converted amount, and the currencies involved.

Error Codes

- `400 Bad Request`: Invalid input or missing required parameters.
- `500 Internal Server Error`: Server error while processing the request.

Example Error Response:

(Json)

```
{
  "error": "Invalid input",
  "message": "Invalid 'from' or 'to' currency code provided."
}
```

Usage Examples

Get Exchange Rates

(http)

GET /api/rates?base=USD

Convert Currency

POST /api/convert

Content-Type: application/json

```
{
  "from": "USD",
  "to": "INR",
  "amount": 100
}
```