

# RATES API – HSBC Assessment

The Rates API is a free service for current and historical foreign exchange rates. It gives historical and current exchange rates for different currencies against the Euro.

Please see below functionalities with snapshots.

## 1. Login/Logout implementation

Username: admin

Password: admin

### a. Login page:



The screenshot shows a web browser window with the address bar displaying 'localhost:8100/login'. The page content is a simple login form on a light gray background. The form includes the heading 'Please sign in', a text input field containing 'admin', a password input field with five dots, and a blue 'Sign in' button.

← → ↻ 🏠 ⓘ localhost:8100/login

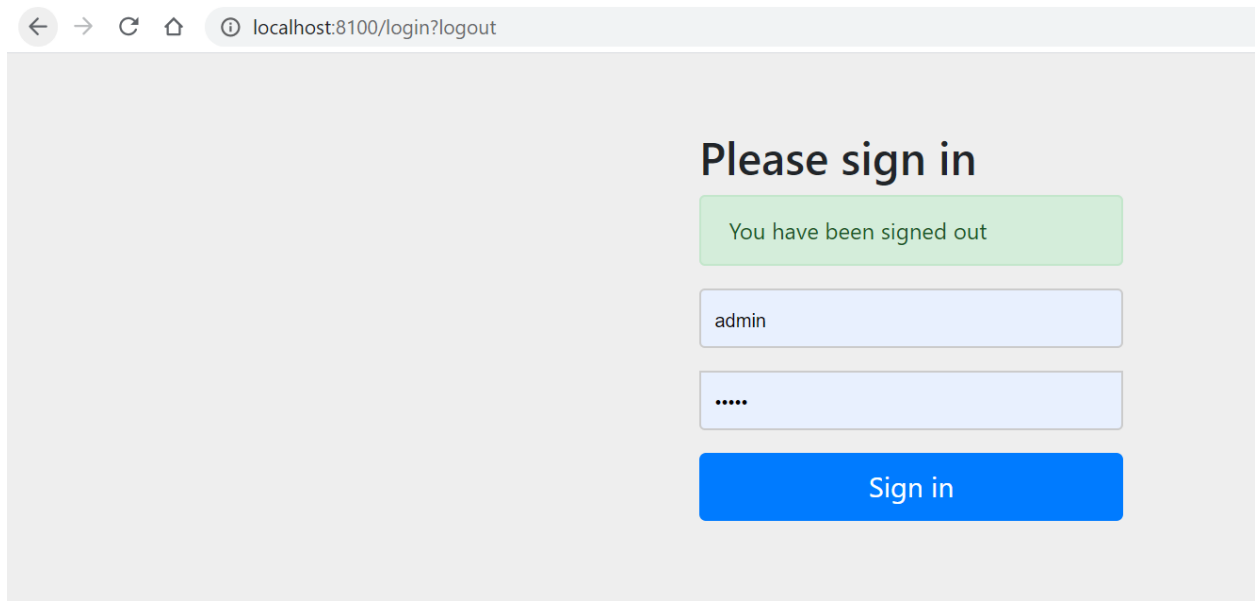
Please sign in

admin

.....

Sign in

**b. Logout page:**



The screenshot shows a web browser window with the address bar displaying "localhost:8100/login?logout". The page content includes a heading "Please sign in", a green message box stating "You have been signed out", and two input fields. The first input field contains the text "admin". The second input field contains five dots, indicating a password. Below these fields is a blue button labeled "Sign in".

← → ↻ 🏠 ⓘ localhost:8100/login?logout

## Please sign in

You have been signed out

admin

.....

Sign in

## 2. Latest Data

This API is flexible and scalable to change the base and symbols.

Default base: EUR

Default symbols: GBP, USD, HKD

a. EndPoint: <http://localhost:8100/rates-details>

The screenshot shows a web browser at `localhost:8100/rates-details`. The page has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. Below the navigation bar is a blue header with the text 'Welcome to Rates API !!'. The main content area displays a table with exchange rates for the base currency EUR as of 09/04/2020. The table lists rates for HKD, USD, and GBP. A green button labeled 'Get Historical Data' is located at the bottom of the table.

EUR	09/04/2020
HKD	8.4259
USD	1.0867
GBP	0.87565

[Get Historical Data](#)

**Rates API**  
Rates API is a free service for current and historical foreign exchange rates.

b. Endpoint with base and symbol: <http://localhost:8100/rates-details?base=USD&symbols=INR>

The screenshot shows the same web browser but with the URL `localhost:8100/rates-details?base=USD&symbols=INR`. The page content is identical to the previous screenshot, but the table now shows the exchange rate for the base currency USD against the symbol INR.

USD	09/04/2020
INR	76.311309469

[Get Historical Data](#)

c. Endpoint with only symbol: <http://localhost:8100/rates-details?symbols=INR,USD>

Here base is not provided thus it will take EUR as default.

The screenshot shows a web browser at the URL `localhost:8100/rates-details?symbols=INR,USD`. The application has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. A blue banner says 'Welcome to Rates API !!'. Below it is a table of exchange rates for the date 09/04/2020. The table lists EUR as the base currency, with INR at 82.9275 and USD at 1.0867. A green button labeled 'Get Historical Data' is at the bottom left of the table area.

EUR	09/04/2020
INR	82.9275
USD	1.0867

[Get Historical Data](#)

# Rates API

Rates API is a free service for current and historical foreign exchange rates.

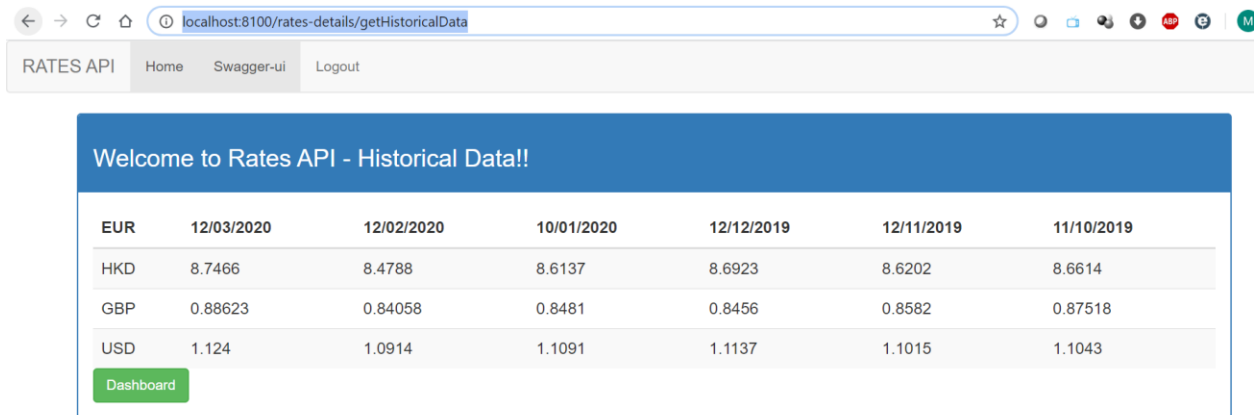
### 3. Historical Data

This API is flexible and scalable to change the base, symbols and months.

Default base: EUR

Default symbols: GBP, USD, HKD

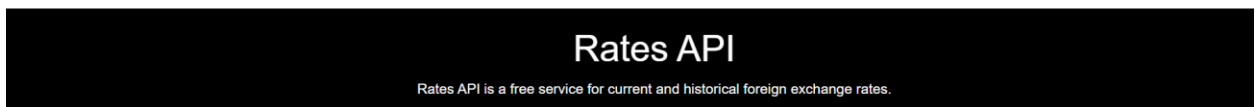
- a. EndPoint: <http://localhost:8100/rates-details/getHistoricalData>



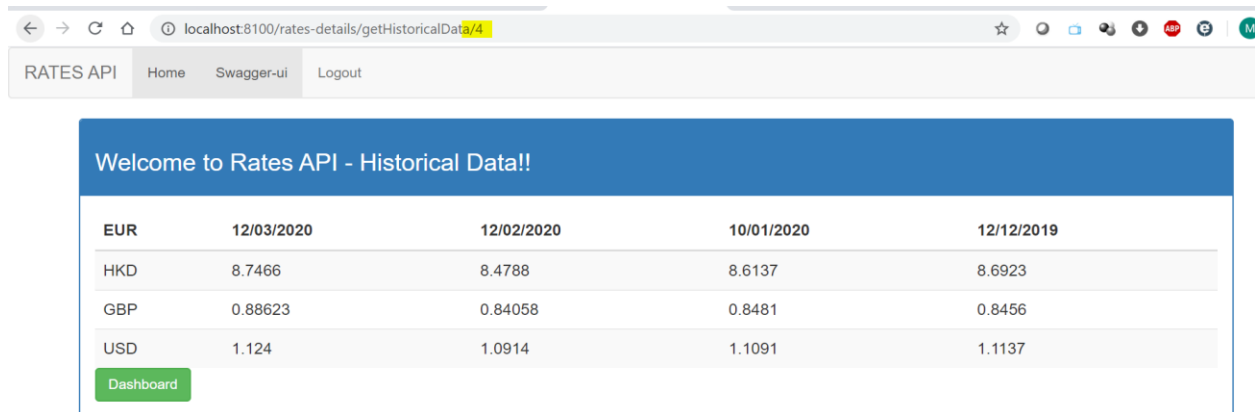
The screenshot shows a web browser at localhost:8100/rates-details/getHistoricalData. The page has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. The main content area has a blue header 'Welcome to Rates API - Historical Data!!' and a table of exchange rates. The table has columns for currency (EUR, HKD, GBP, USD) and dates (12/03/2020, 12/02/2020, 10/01/2020, 12/12/2019, 12/11/2019, 11/10/2019). A green 'Dashboard' button is at the bottom left.

	12/03/2020	12/02/2020	10/01/2020	12/12/2019	12/11/2019	11/10/2019
EUR						
HKD	8.7466	8.4788	8.6137	8.6923	8.6202	8.6614
GBP	0.88623	0.84058	0.8481	0.8456	0.8582	0.87518
USD	1.124	1.0914	1.1091	1.1137	1.1015	1.1043

Dashboard



- b. EndPoint: <http://localhost:8100/rates-details/getHistoricalData/4>  
Here month - 4 is provided, thus it will fetch last 4 months of data.



The screenshot shows the same web interface as before, but the URL is localhost:8100/rates-details/getHistoricalData/4. The table now only shows data for the dates 12/03/2020, 12/02/2020, 10/01/2020, and 12/12/2019.

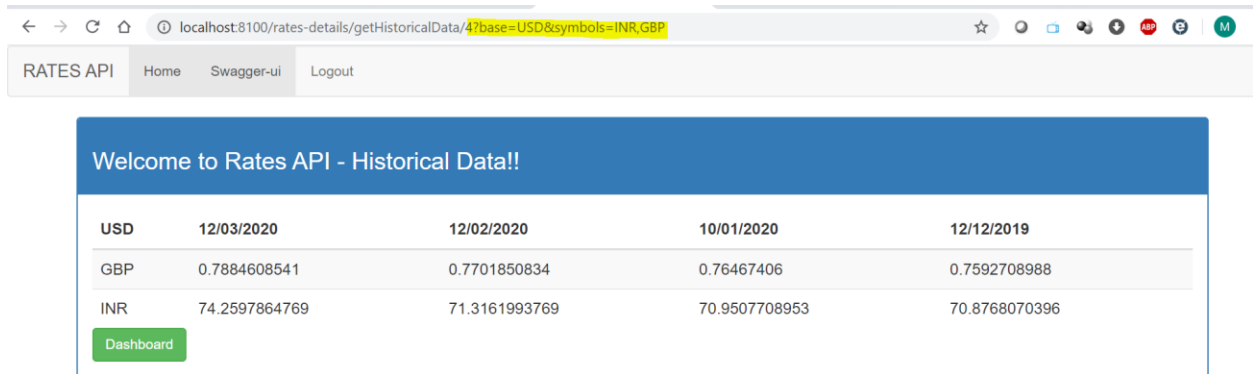
	12/03/2020	12/02/2020	10/01/2020	12/12/2019
EUR				
HKD	8.7466	8.4788	8.6137	8.6923
GBP	0.88623	0.84058	0.8481	0.8456
USD	1.124	1.0914	1.1091	1.1137

Dashboard



c. EndPoint: <http://localhost:8100/rates-details/getHistoricalData/4?base=USD&symbols=INR,GBP>

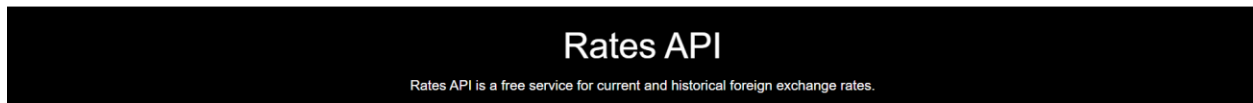
Here custom months, base and symbols are provided



The screenshot shows a web browser at localhost:8100/rates-details/getHistoricalData/4?base=USD&symbols=INR,GBP. The application has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. The main content area has a blue header 'Welcome to Rates API - Historical Data!!' and a table of exchange rates. A green 'Dashboard' button is at the bottom left of the table.

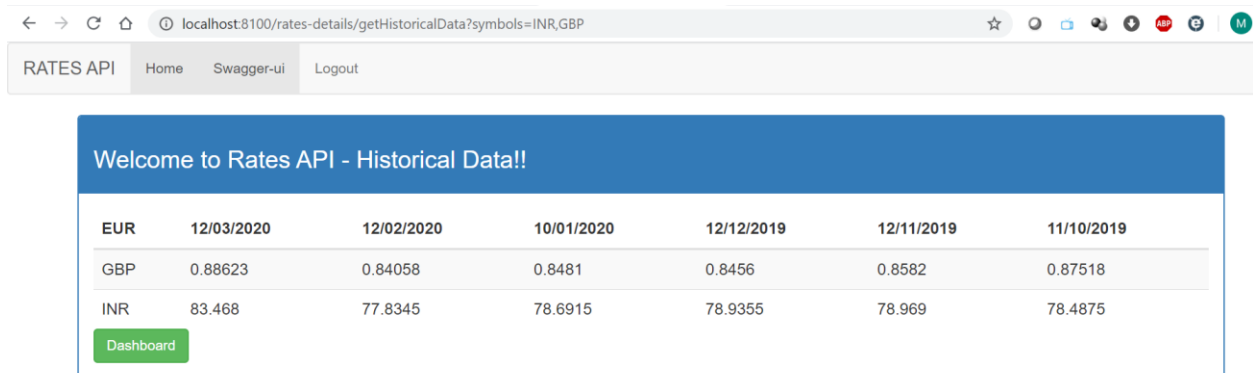
USD	12/03/2020	12/02/2020	10/01/2020	12/12/2019
GBP	0.7884608541	0.7701850834	0.76467406	0.7592708988
INR	74.2597864769	71.3161993769	70.9507708953	70.8768070396

Dashboard



d. EndPoint: <http://localhost:8100/rates-details/getHistoricalData?symbols=INR,GBP>

Here only symbols are provided, thus it will take default months i.e. 6 and default base i.e. EUR



The screenshot shows a web browser at localhost:8100/rates-details/getHistoricalData?symbols=INR,GBP. The application has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. The main content area has a blue header 'Welcome to Rates API - Historical Data!!' and a table of exchange rates. A green 'Dashboard' button is at the bottom left of the table.

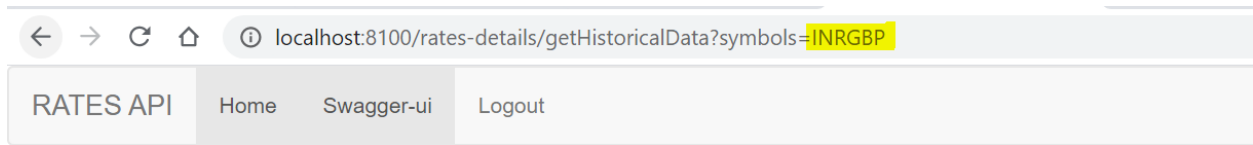
EUR	12/03/2020	12/02/2020	10/01/2020	12/12/2019	12/11/2019	11/10/2019
GBP	0.88623	0.84058	0.8481	0.8456	0.8582	0.87518
INR	83.468	77.8345	78.6915	78.9355	78.969	78.4875

Dashboard



#### 4. Error

Here comma is missing between symbols and thus API call fails, and general error page is displayed.



An exception occurred! Please contact Support!

## 5. SWAGGER UI

EndPoint: <http://localhost:8100/swagger-ui.html>

The screenshot shows the Swagger UI interface in a web browser. The browser's address bar displays the URL `localhost:8100/swagger-ui.html/#/retrieve-rates-controller`. The Swagger UI header is green with the Swagger logo and a dropdown menu set to 'default'. The main content area is titled 'Api Documentation' with a version indicator '1.0'. Below the title, there are links for 'Terms of service' and 'Apache 2.0'. The interface lists three controllers: 'basic-error-controller', 'logout-controller', and 'retrieve-rates-controller'. The 'retrieve-rates-controller' is expanded, showing three endpoints: `/rates-details` (GET, `retrieveRates`), `/rates-details/getHistoricalData` (GET, `getHistoricalRates`), and `/rates-details/getHistoricalData/{months}` (GET, `getHistoricalRates`).

localhost:8100/swagger-ui.html/#/retrieve-rates-controller

swagger Select a spec default

### Api Documentation <sup>1.0</sup>

[ Base URL: localhost:8100/ ]  
<http://localhost:8100/v2/api-docs>

Api Documentation  
[Terms of service](#)  
[Apache 2.0](#)

**basic-error-controller** Basic Error Controller >

**logout-controller** Logout Controller >

**retrieve-rates-controller** Retrieve Rates Controller v

GET	/rates-details	retrieveRates
GET	/rates-details/getHistoricalData	getHistoricalRates
GET	/rates-details/getHistoricalData/{months}	getHistoricalRates