

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

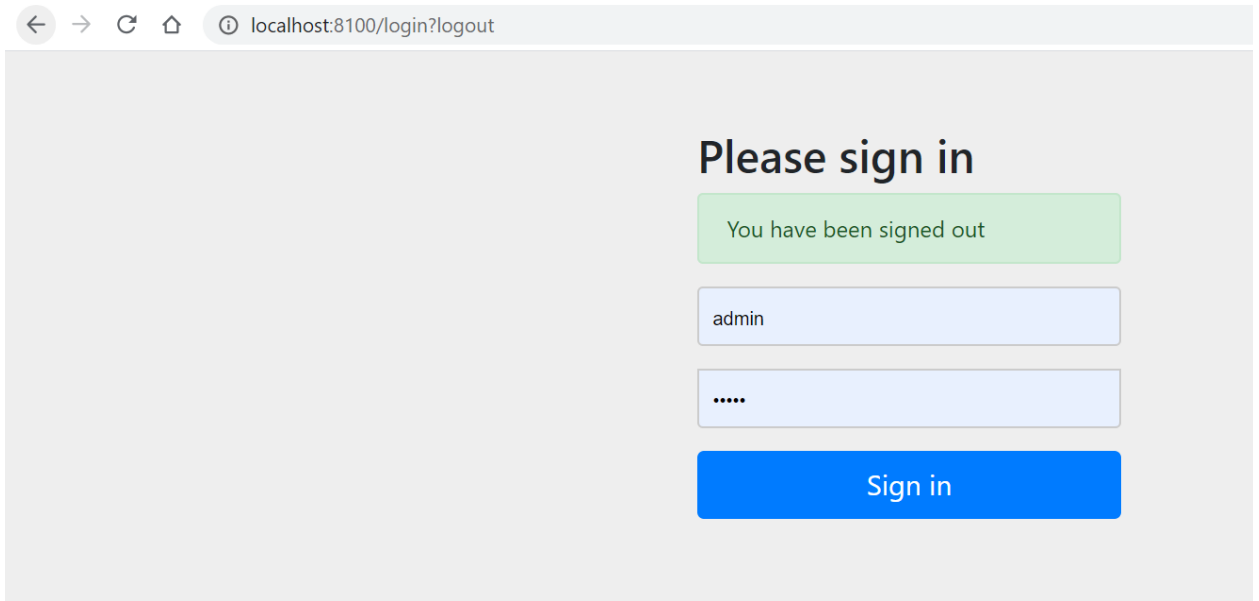
Please sign in

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", a text input field containing "admin", a password input field with masked characters "....", and a blue "Sign in" button.

← → ↻ 🏠 ⓘ 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 base: 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 "Welcome to Rates API !!". The main content area displays a table with exchange rates for EUR as of 09/04/2020. The table lists HKD, USD, and GBP with their respective rates. A green button labeled "Get Historical Data" is 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 similar to the previous one, but the table now shows the exchange rate for USD as of 09/04/2020, specifically for the INR symbol. The rate for INR is 76.311309469. The "Get Historical Data" button remains at the bottom.

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, a table displays exchange rates for EUR (base) as of 09/04/2020. The table lists 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.

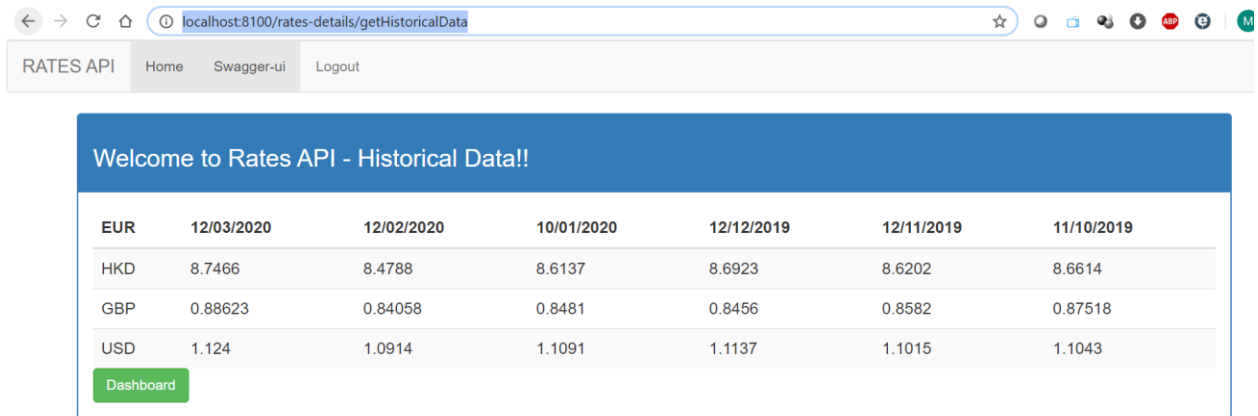
3. Historical Data

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

Default base : EUR

Default base: GBP,USD,HKD

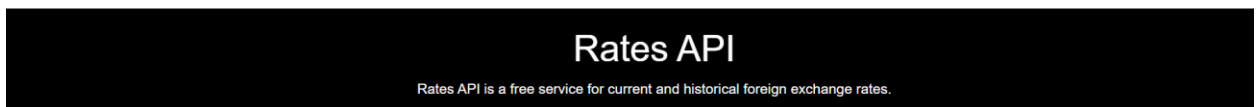
- a. EndPoint: <http://localhost:8100/rates-details/getHistoricalData>



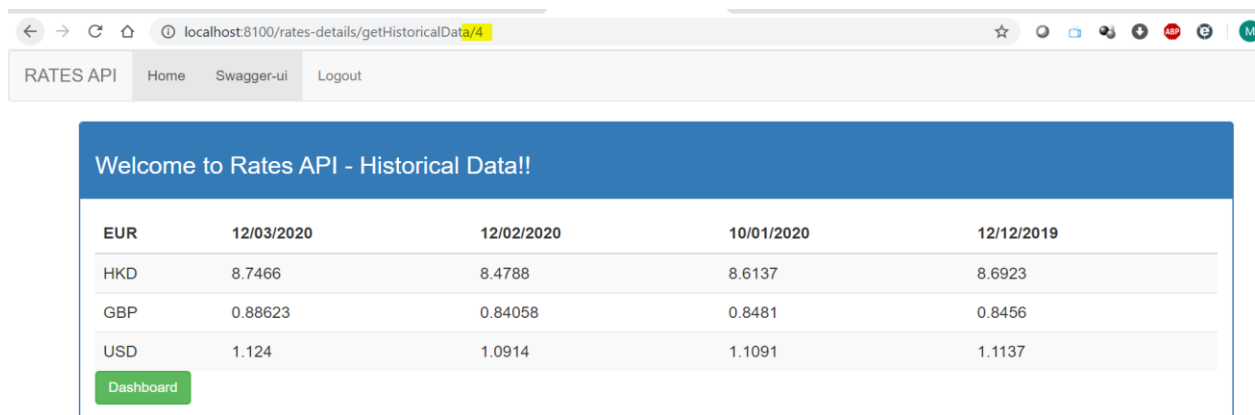
The screenshot shows a web browser at localhost:8100/rates-details/getHistoricalData. The page has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. Below the navigation bar is a blue header with the text 'Welcome to Rates API - Historical Data!!'. The main content area contains a table with exchange rates for EUR, HKD, GBP, and USD across several dates. A green 'Dashboard' button is located at the bottom left of the table.

	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>



The screenshot shows a web browser at localhost:8100/rates-details/getHistoricalData/4. The page layout is identical to the previous screenshot, with the same navigation bar, header, and table of exchange rates. A green 'Dashboard' button is also present.

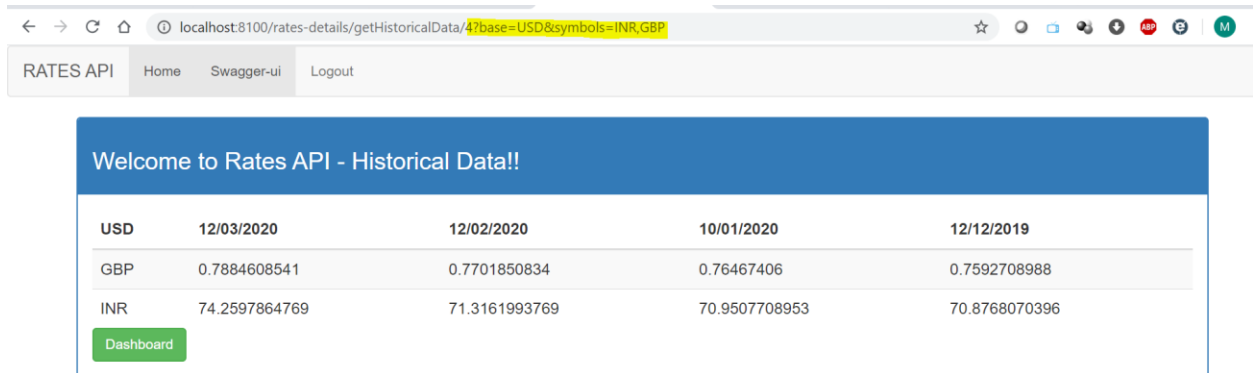
	12/03/2020	12/02/2020	10/01/2020	12/12/2019
EUR				
HKD	8.7466	8.4788	8.6137	8.6923
GBP	0.88623	0.84058	0.8481	0.8456
USD	1.124	1.0914	1.1091	1.1137

Dashboard



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

Here custom months, base and symbols are provided

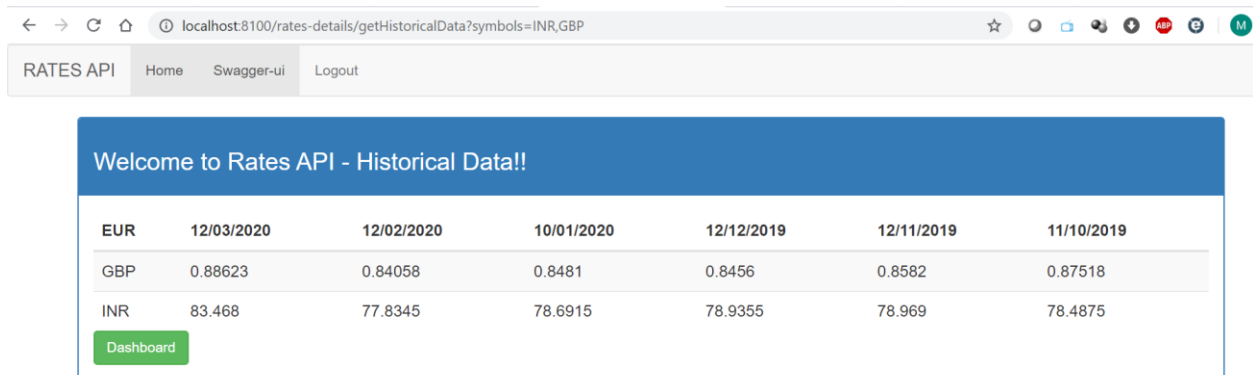


The screenshot shows a web browser at localhost:8100/rates-details/getHistoricalData/4?base=USD&symbols=INR,GBP. The application has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. The main content area has a blue header 'Welcome to Rates API - Historical Data!!' and a table of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

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

- 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

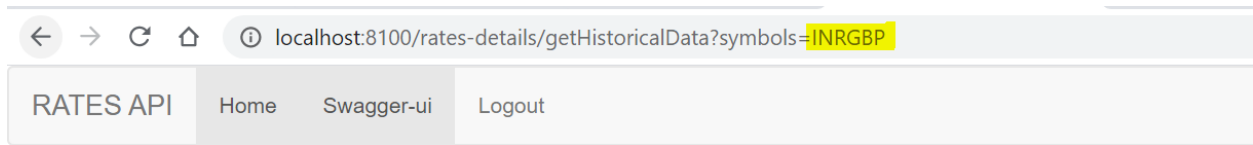


The screenshot shows a web browser at localhost:8100/rates-details/getHistoricalData?symbols=INR,GBP. The application has a navigation bar with 'RATES API', 'Home', 'Swagger-ui', and 'Logout'. The main content area has a blue header 'Welcome to Rates API - Historical Data!!' and a table of exchange rates.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

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

4. Error

Here comma is missing between symbols and thus API call fails and customer 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 API controllers: 'basic-error-controller' (Basic Error Controller), 'logout-controller' (Logout Controller), and 'retrieve-rates-controller' (Retrieve Rates Controller). The 'retrieve-rates-controller' is expanded, showing three endpoints: a GET endpoint for '/rates-details' (retrieveRates), a GET endpoint for '/rates-details/getHistoricalData' (getHistoricalRates), and a GET endpoint for '/rates-details/getHistoricalData/{months}' (getHistoricalRates).

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

swagger Select a spec default

Api Documentation ^{1.0}

[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