

API lar bilan ishlash

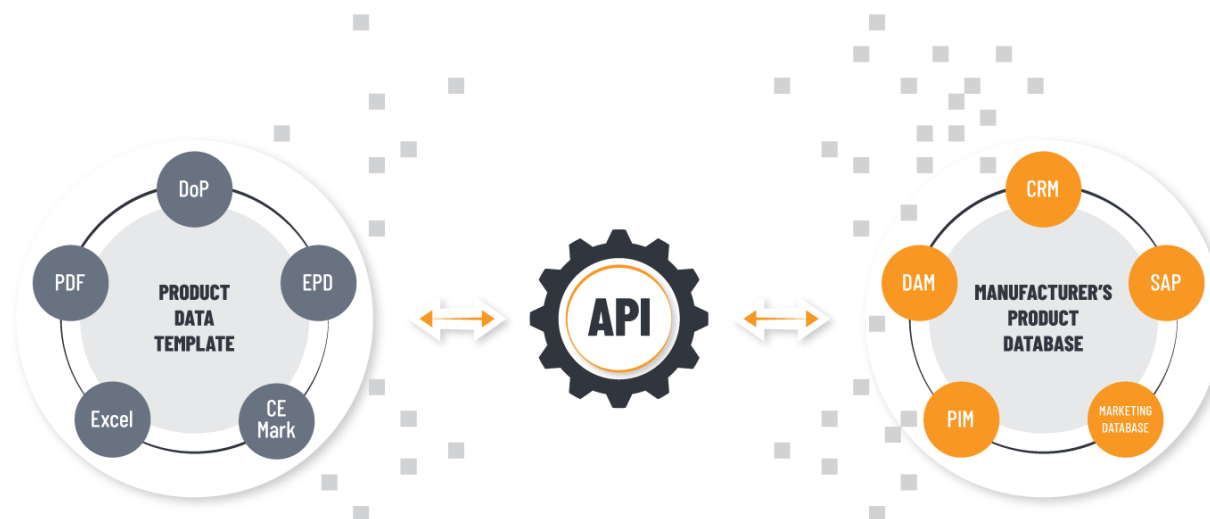
Reja:

1. **API tushunchasi**
2. **Postman dasturi**
3. **GSON POJO Convertor**
4. **Markaziy bank API dan foydalanish**



API tushunchasi

API - Application Programming Interface computer dasturlari o'rtasidagi ma'lumot almashinish qonun qoidalar majmuidir.



API tushunchasi

API – dasturchilar foydalanishi mumkin bo'lgan bir qancha methodlardan va ulardan foydalanish bo'yicha yo'riqnomadan iborat bo'lishi mumkin. Bunda dasturchi api ni taqdim qilgan tizim yoki api methodlarining ichki mexanizimi haqida bilishi shart emas. U api yo'riqnomasi bo'yicha uning methodlaridan foydalana olishi mumkin.

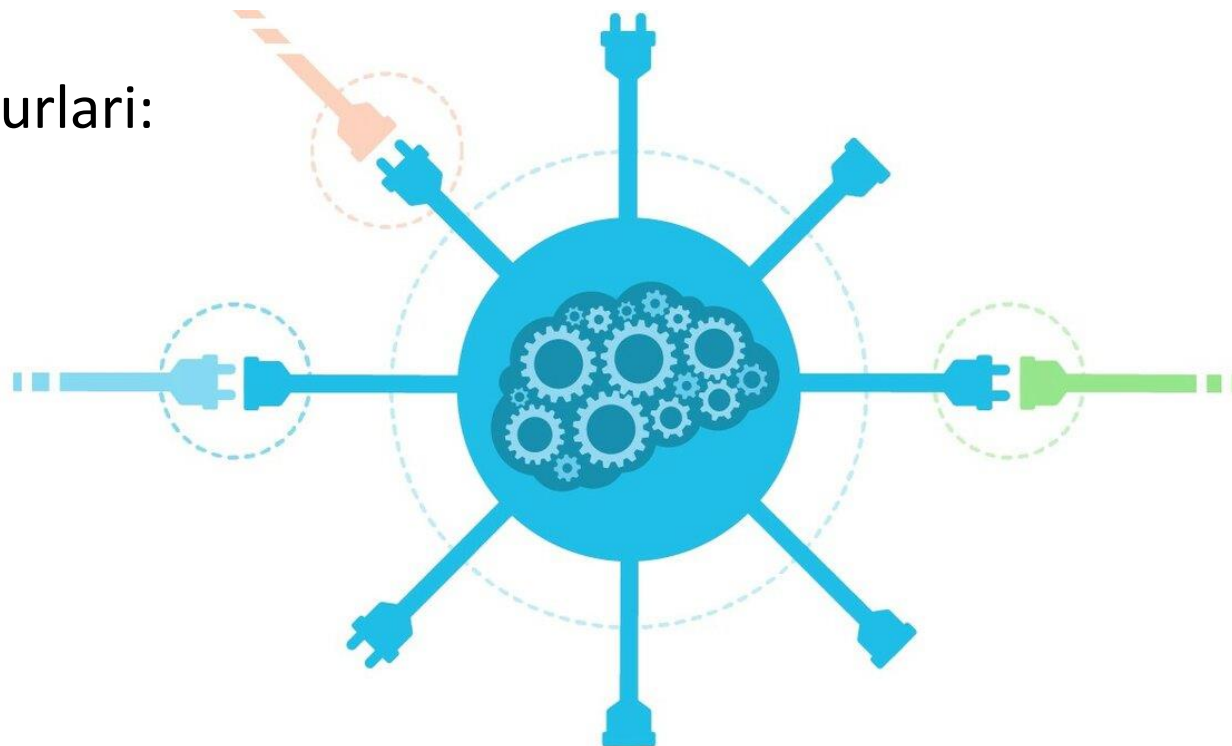
API-interface dasturchilarga tayyor funksionallardan foydalangan holda vaqt va energiyani tejash imkonini beradi. Bu esa yozildaigan kodni kam bo'lishini taminlaydi.

<https://www.youtube.com/watch?v=s7wmiS2mSXY>

API tushunchasi

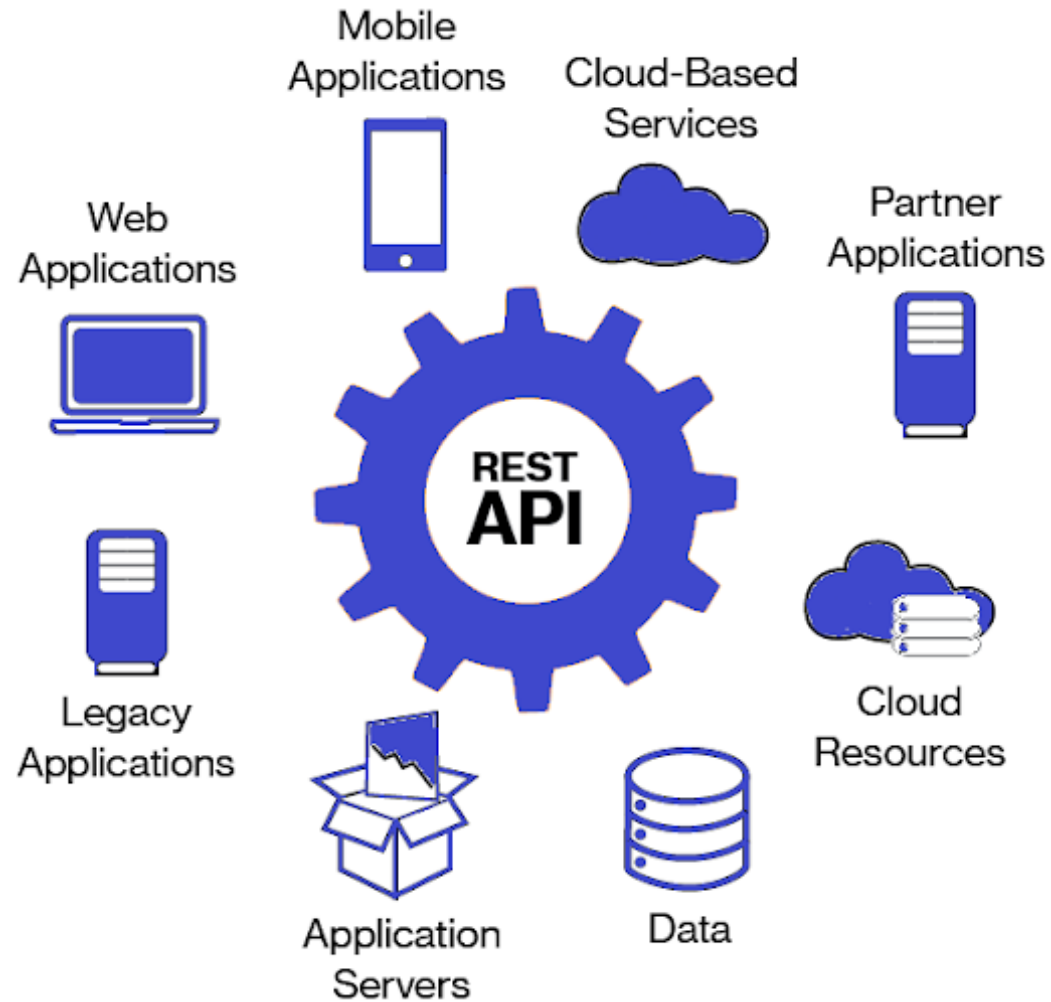
Hozirda keng tarqalga API turlari:

- CORBA;
- RPC
- SOAP API;
- REST API.

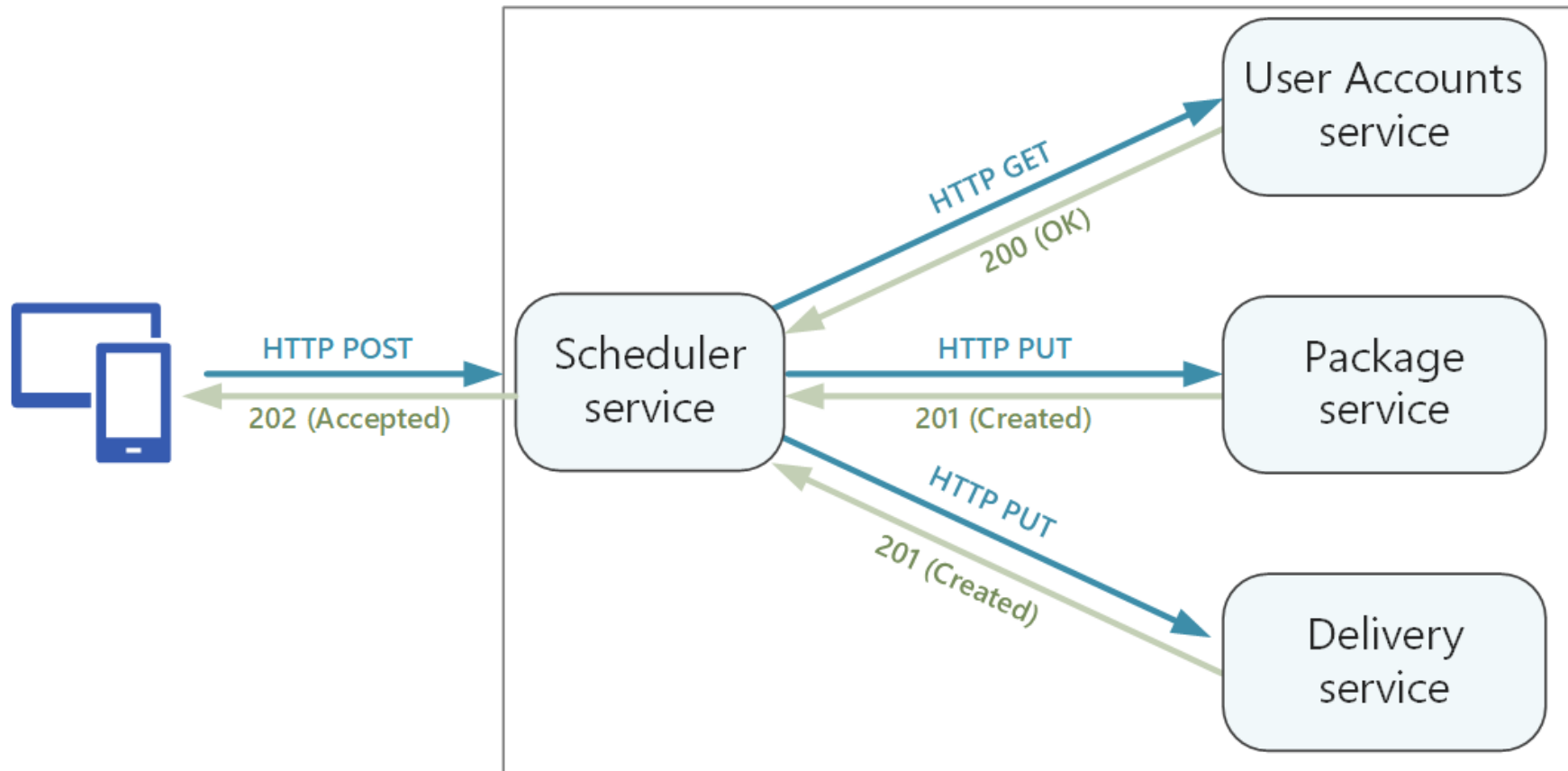


REST API

- REST - **R**epresentational **S**tate **T**ransfer

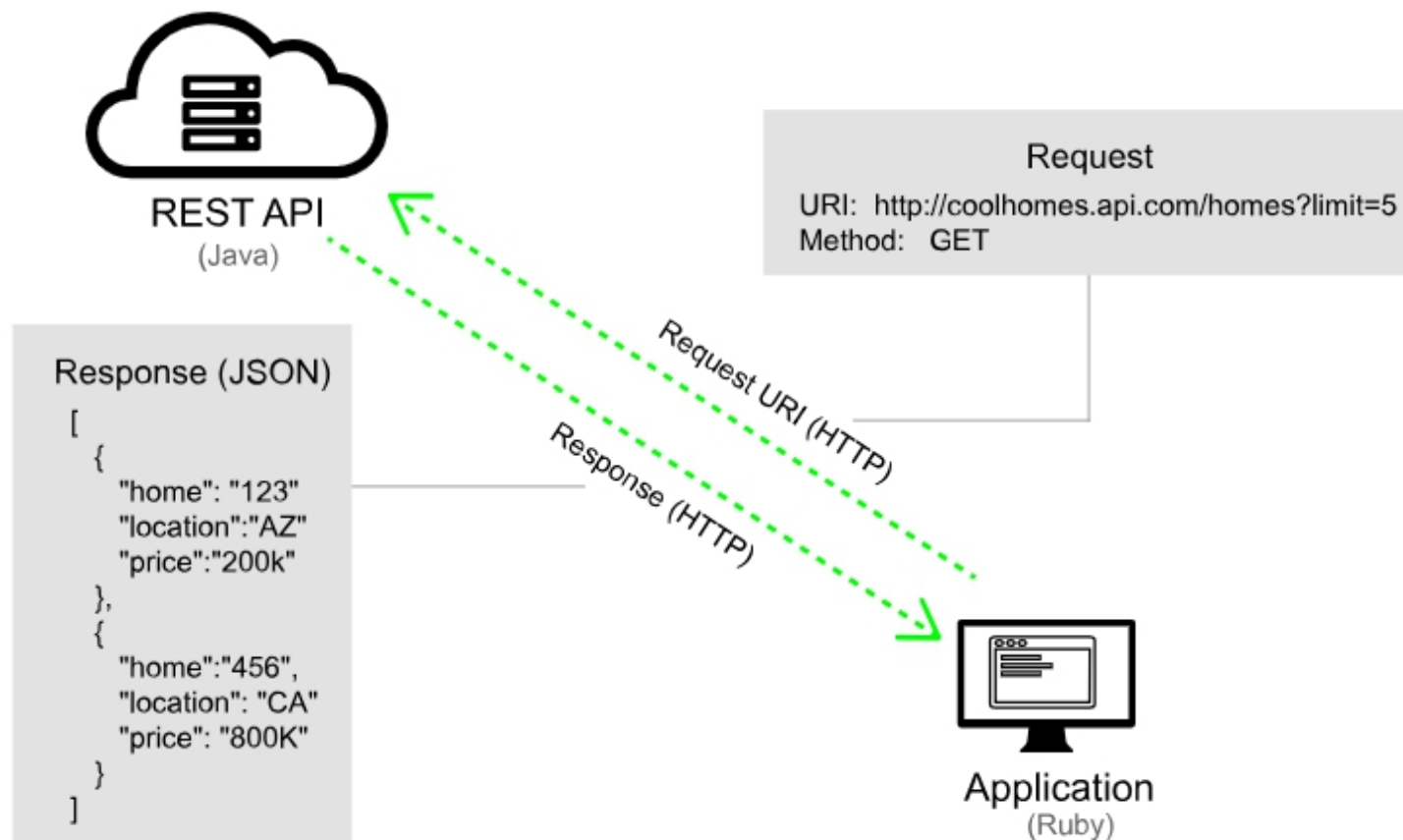


REST API



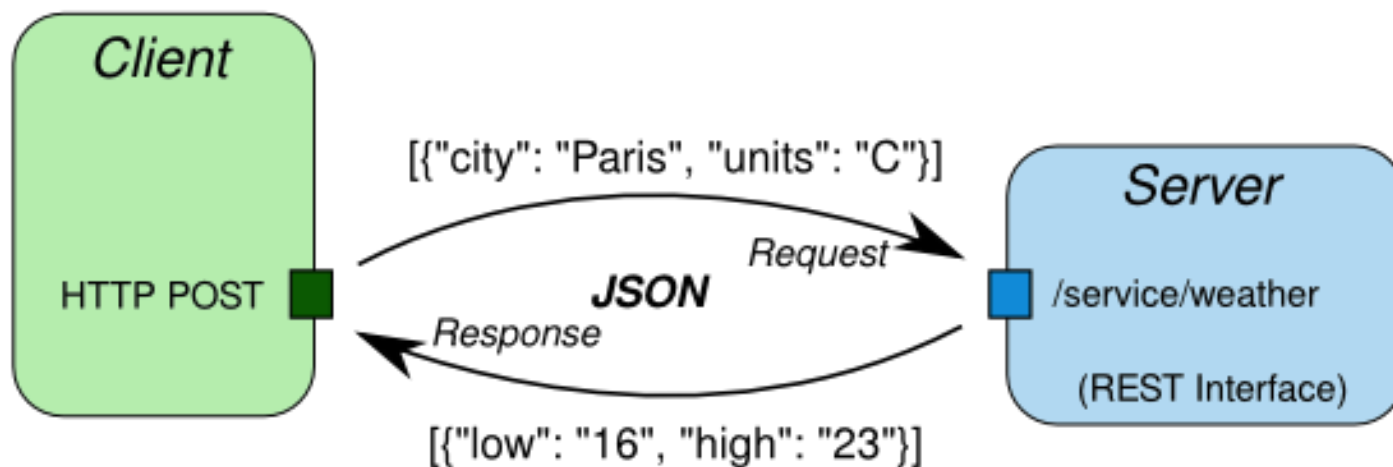
REST API

REST API model

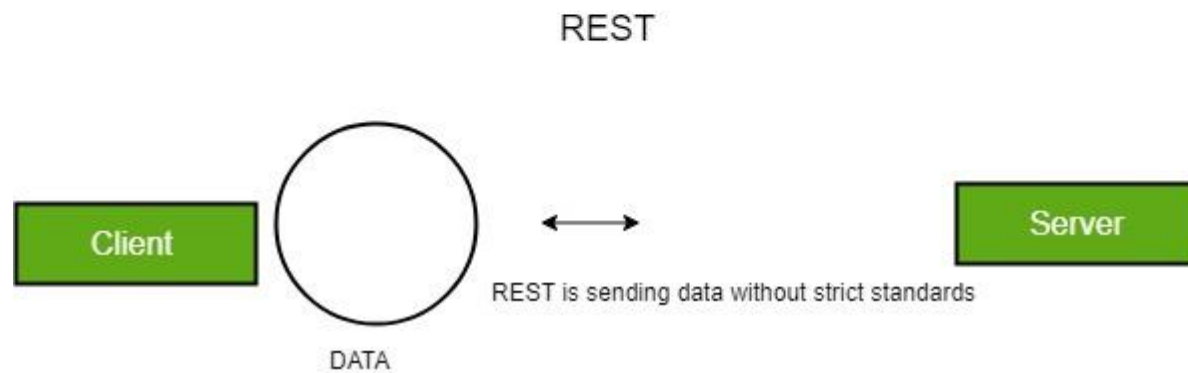
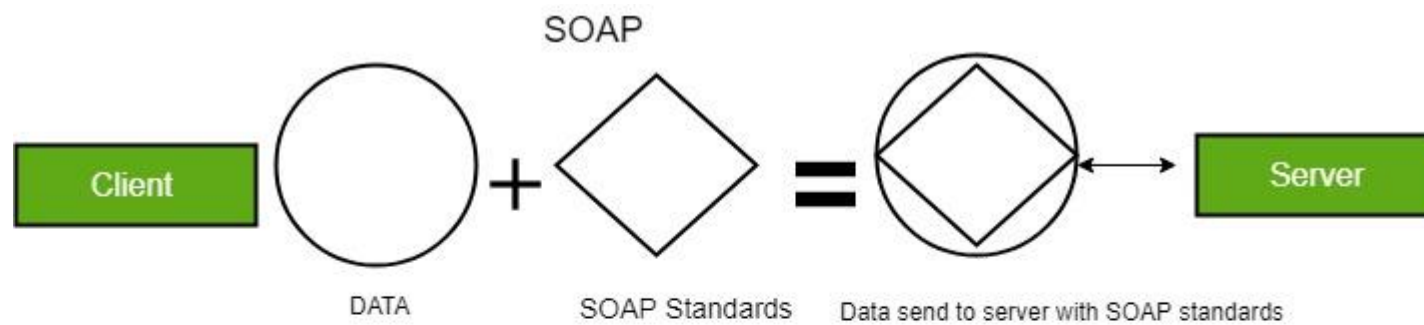


REST API

JSON / REST / HTTP



REST vs SOAP



REST vs SOAP

SOAP vs REST

SOAP

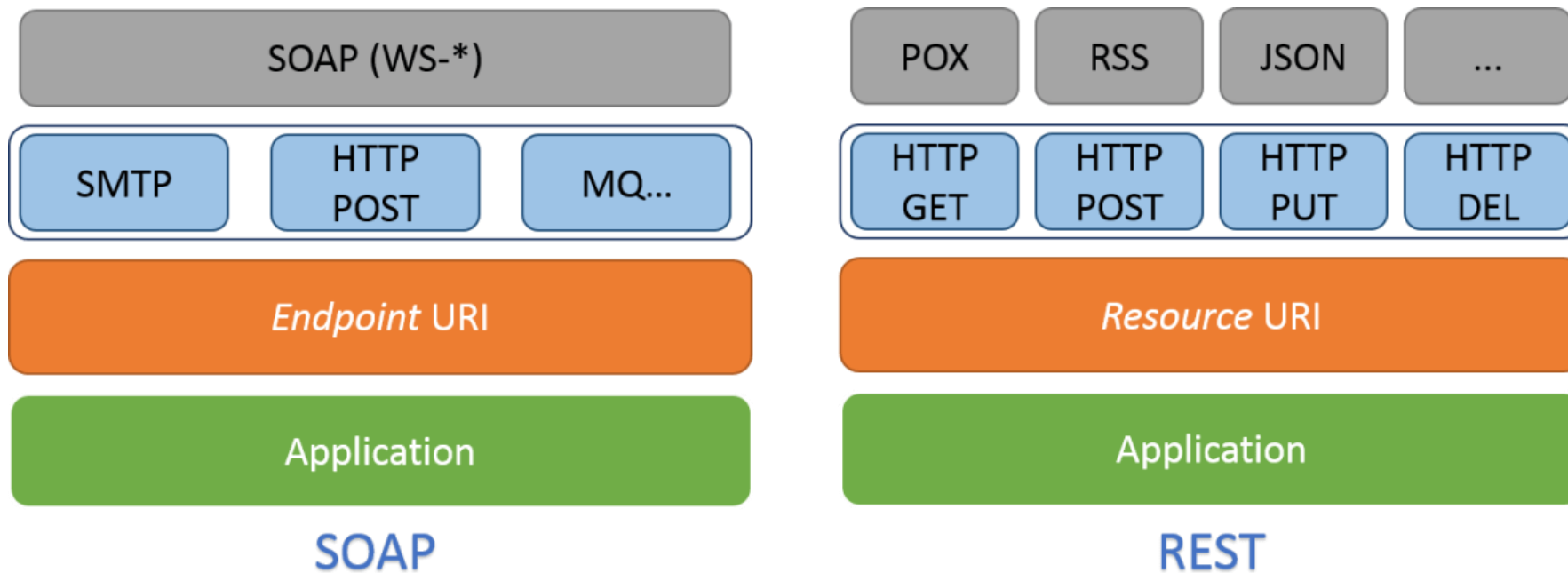


REST



*REST are mostly used in industry

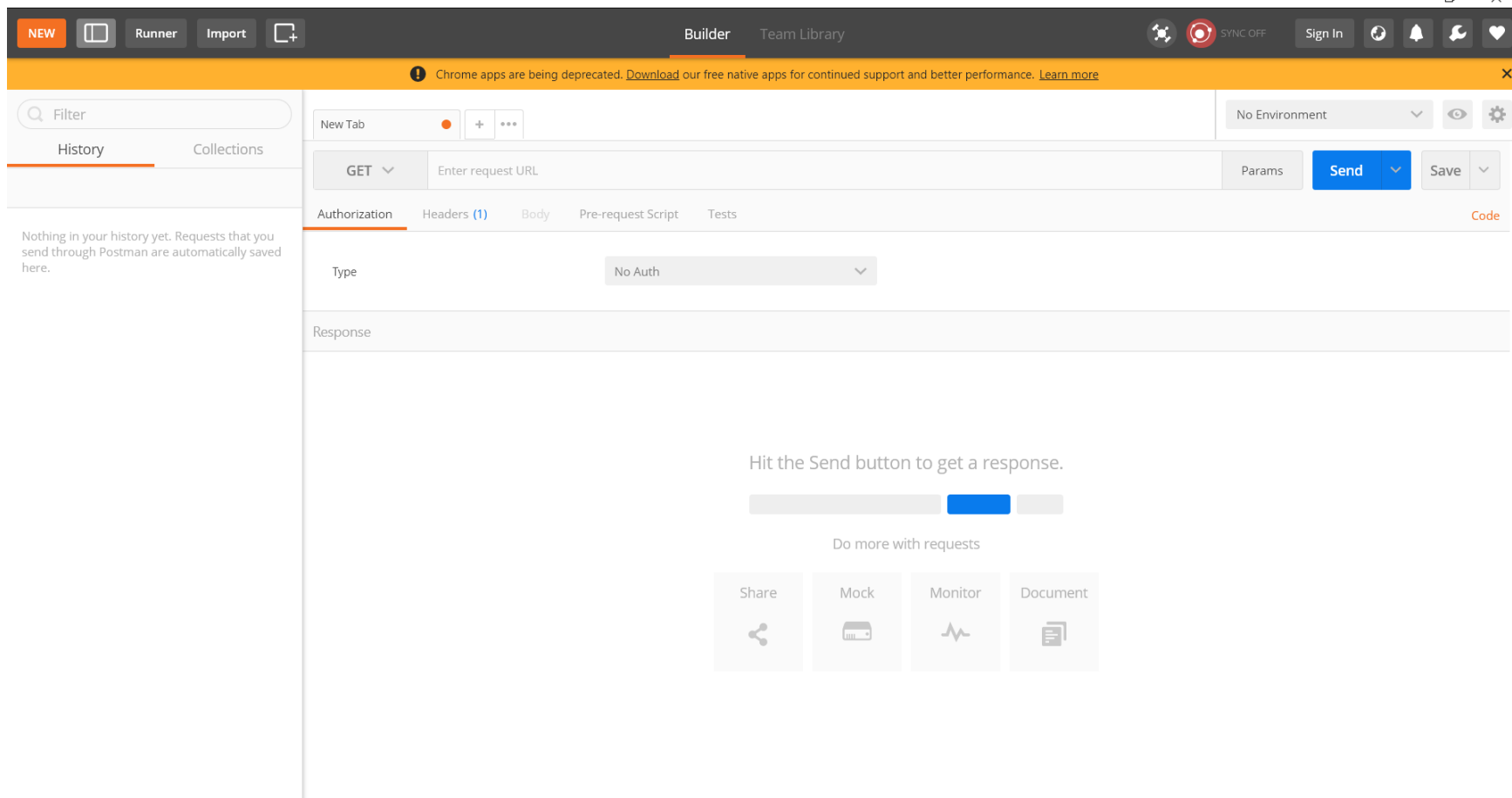
REST vs SOAP



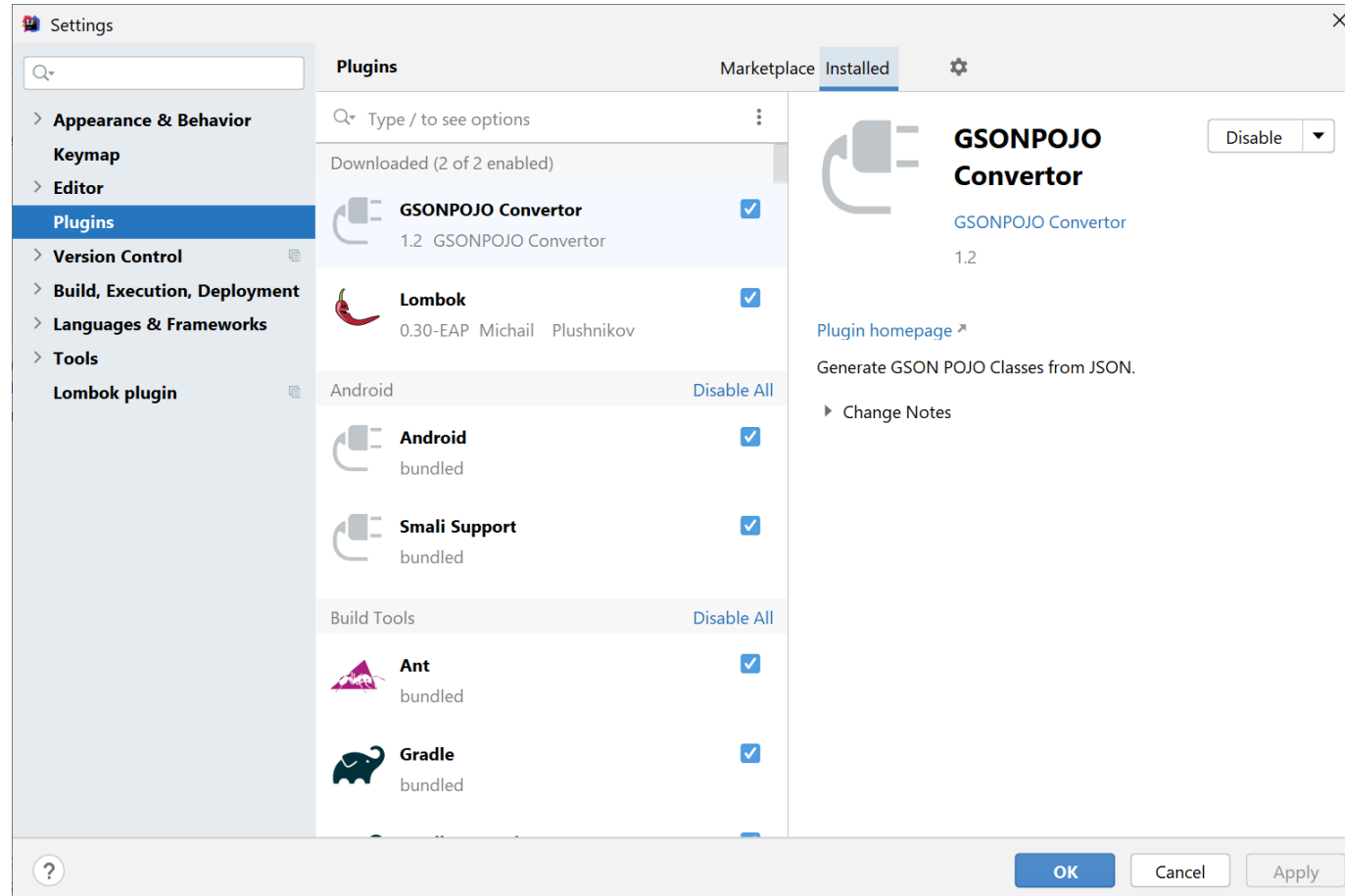
Postman dasturi

- Postman bu API lar bilan ishlashga mo'ljallangan dasturdir.
- <https://www.postman.com/downloads/> havolasi orqali ko'chirib olish mumkin.
- API yaratish va test qilish uchun bepul foydalanish mumkin;
- Qo'shimcha imkoniyatlaridan foydalanish uchun pulli tariflaridan birini tanlashga to'g'ri keladi.

Postman dasturi

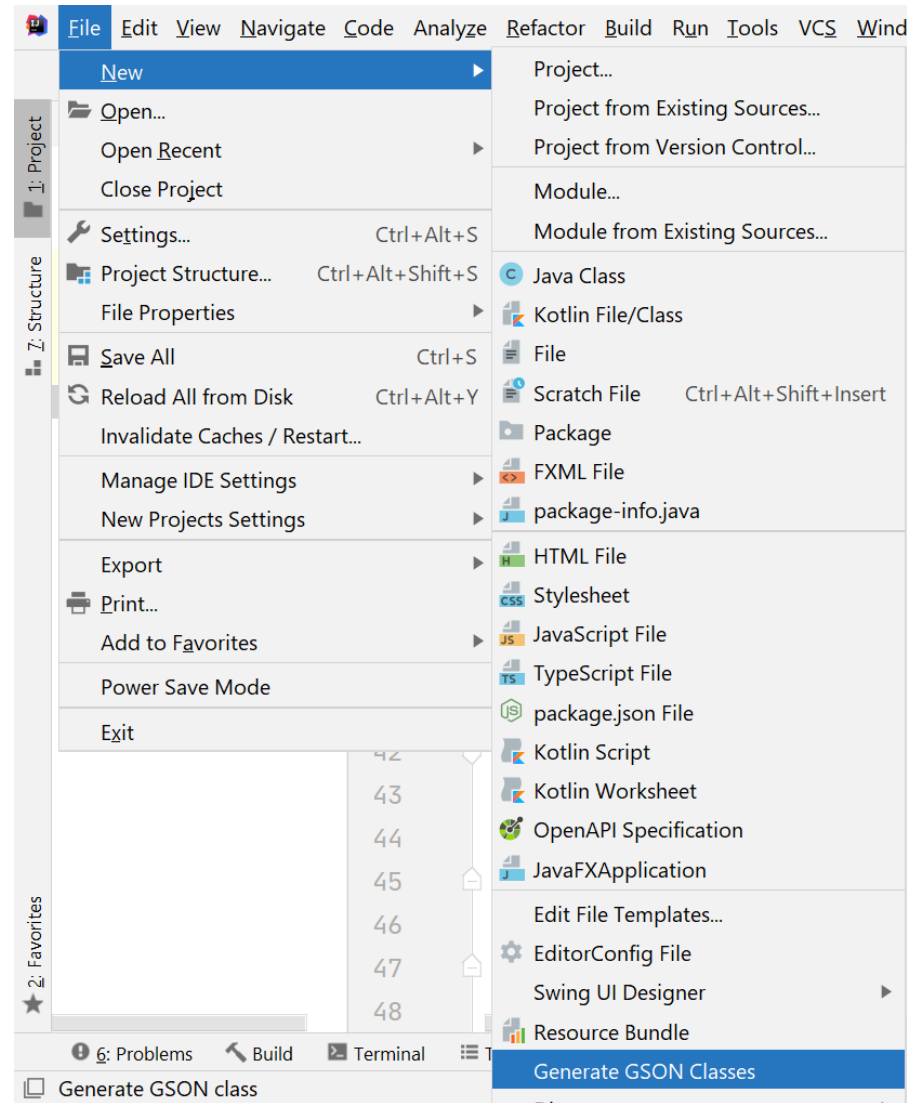


GSON POJO Convertor

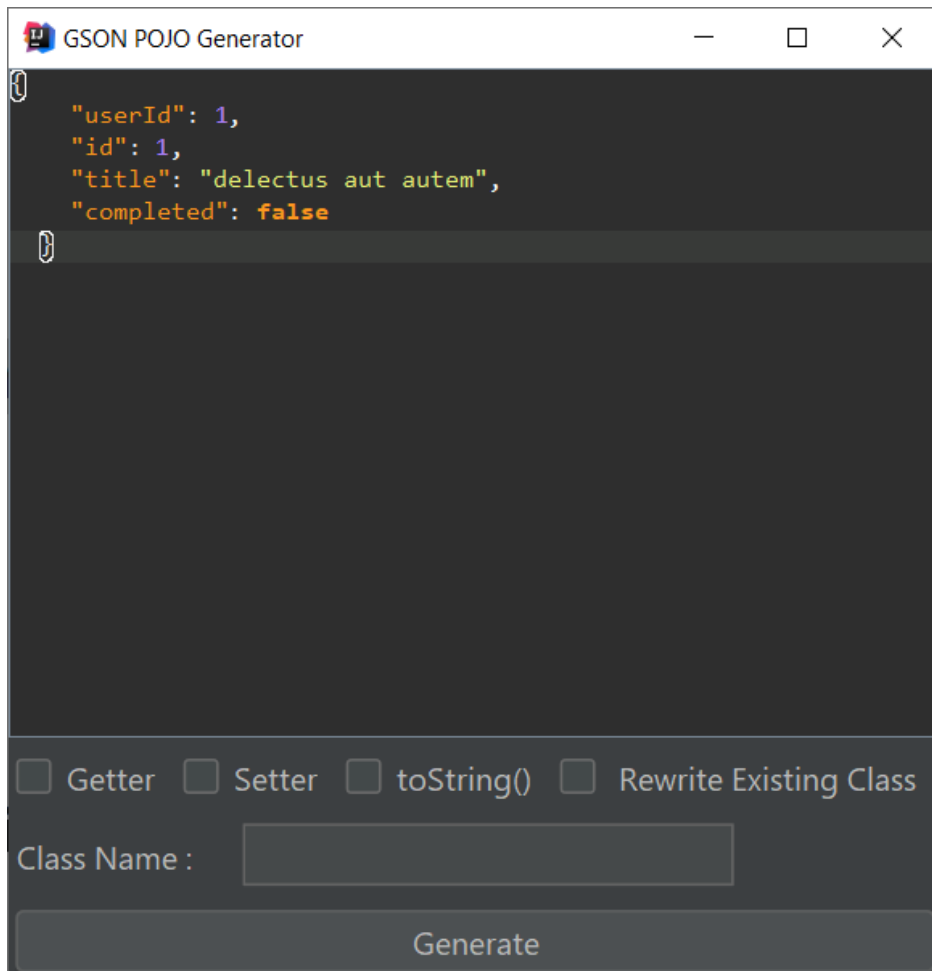


<https://plugins.jetbrains.com/plugin/9895-gsonpojo-convertor>

GSON POJO Convertor



GSON POJO Converter



The screenshot shows a web-based application titled "GSON POJO Generator". It features a dark-themed text editor with a JSON input field containing the following code:

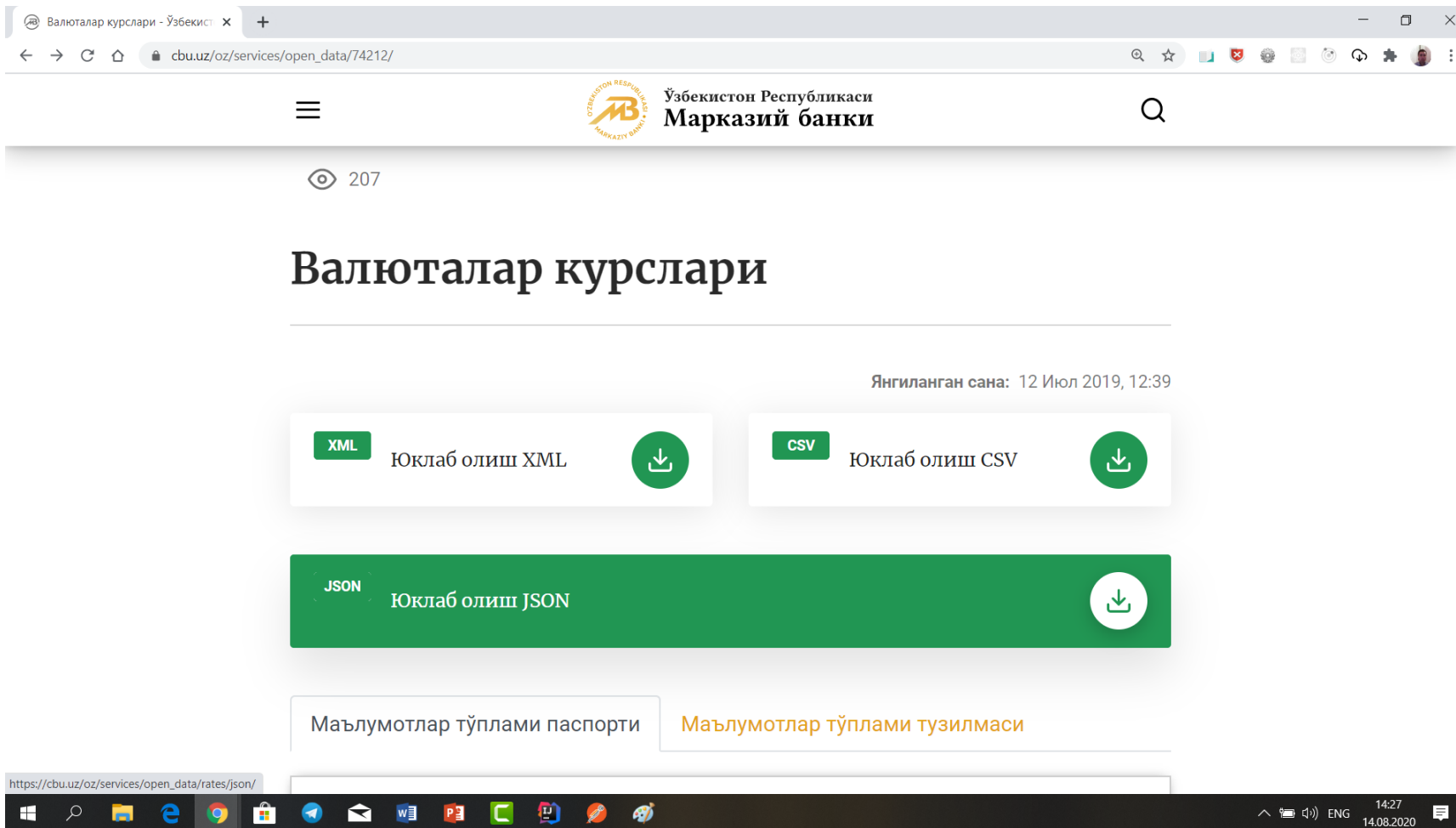
```
{  "userId": 1,  "id": 1,  "title": "delectus aut autem",  "completed": false}
```

Below the text editor, there are four checkboxes for additional options:

- ☐ Getter
- ☐ Setter
- ☐ toString()
- ☐ Rewrite Existing Class

Below these options is a text input field labeled "Class Name :". At the bottom of the form is a large "Generate" button.

Markaziy bank API bilan ishlash



The screenshot shows a web browser window with the URL `cbu.uz/oz/services/open_data/74212/`. The page header includes the Central Bank of Uzbekistan logo and name in Uzbek: "Ўзбекистон Республикаси Марказий банки". Below the header, there is a view count of 207 and the title "Валюталар курслари". A timestamp indicates the data was updated on July 12, 2019, at 12:39. Three download buttons are visible: "XML" (Юклаб олиш XML), "CSV" (Юклаб олиш CSV), and "JSON" (Юклаб олиш JSON). At the bottom, there are two tabs: "Маълумотлар тўплами паспорти" (Data Set Passport) and "Маълумотлар тўплами тузилмаси" (Data Set Structure). The browser's address bar shows the full URL: `https://cbu.uz/oz/services/open_data/rates/json/`. The Windows taskbar at the bottom shows the system time as 14:27 on 14.08.2020.

Валюталар курслари

Янгиланган сана: 12 Июл 2019, 12:39

XML Юклаб олиш XML

CSV Юклаб олиш CSV

JSON Юклаб олиш JSON

Маълумотлар тўплами паспорти Маълумотлар тўплами тузилмаси

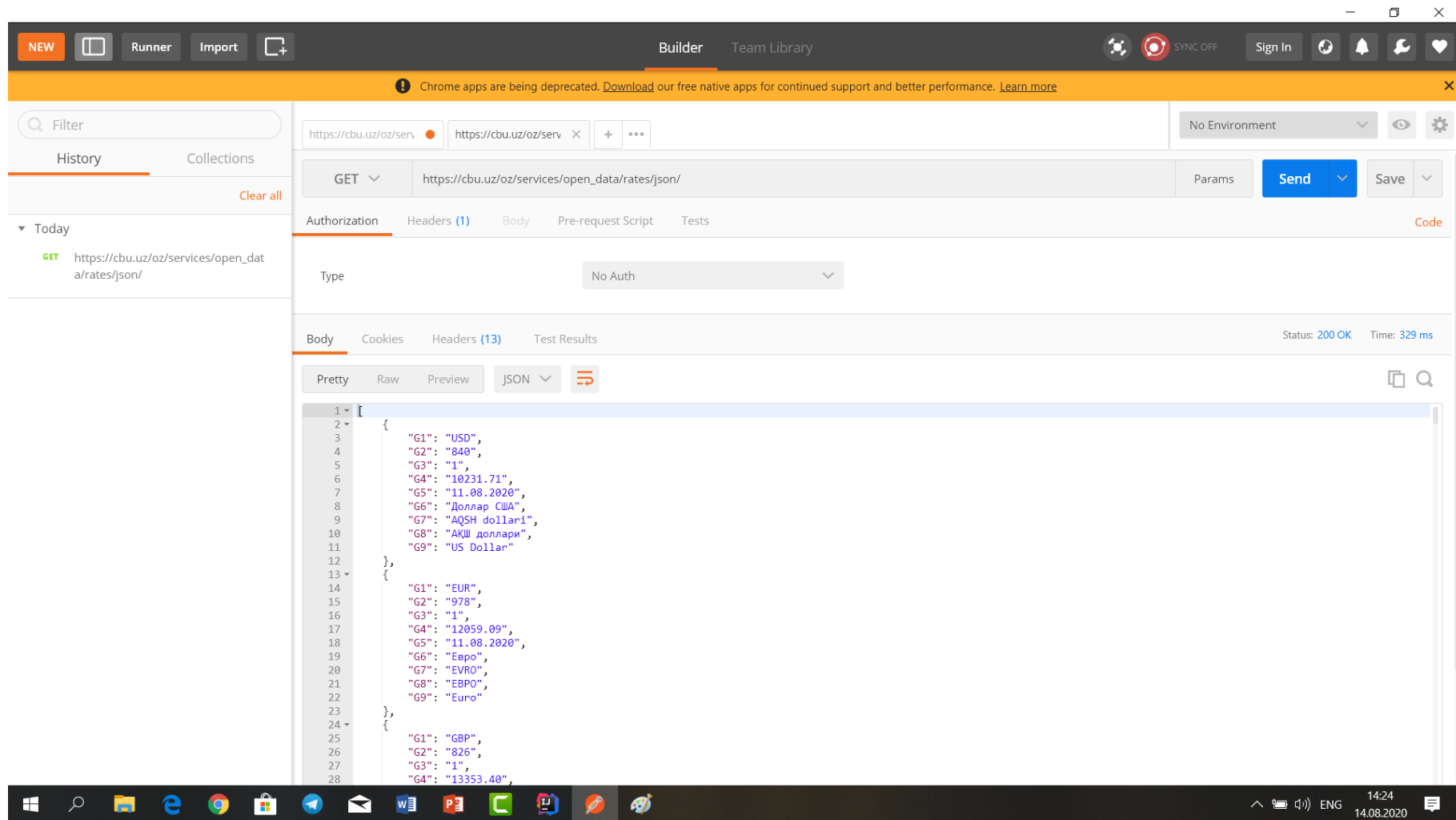
`https://cbu.uz/oz/services/open_data/rates/json/`

Markaziy bank API bilan ishlash

```
https://cbu.uz/oz/services/open_ x +
cbu.uz/oz/services/open_data/rates/json/

[{"G1": "USD", "G2": "840", "G3": "1", "G4": "10231.71", "G5": "11.08.2020", "G6": "\u0041\u0043\u0043\u0043\u0040\u00440", "G7": "AQSH dollari", "G8": "\u0041\u0049\u0042 \u0043\u0043\u0043\u0043\u0040\u00440\u00438", "G9": "US Dollar"}, {"G1": "EUR", "G2": "978", "G3": "1", "G4": "12059.09", "G5": "11.08.2020", "G6": "\u00415\u00432\u00440\u0043e", "G7": "EVRO", "G8": "E\u00412\u0042\u0041e", "G9": "Euro"}, {"G1": "GBP", "G2": "826", "G3": "1", "G4": "13353.40", "G5": "11.08.2020", "G6": "\u00424\u00443\u0043d\u00442", "G7": "Angliya funt sterlingi", "G8": "\u0041\u0043d\u00433\u0043b\u00438\u0044f \u0044\u0043\u0043d\u00442", "G9": "Pound Sterling"}, {"G1": "RUB", "G2": "643", "G3": "1", "G4": "138.65", "G5": "11.08.2020", "G6": "\u00420\u0043e\u00441\u00441\u00438\u00439\u00441\u0043a\u00438\u00439 \u00440\u00443\u00431\u0043b\u0044c", "G7": "Rossiya rubli", "G8": "\u00420\u0043e\u00441\u00441\u00438\u0044f", "G9": "Russian Ruble"}, {"G1": "CNY", "G2": "156", "G3": "1", "G4": "1468.60", "G5": "11.08.2020", "G6": "\u0042e\u00430\u0043d\u0044c", "G7": "Xitoy yuani", "G8": "\u00425\u00438\u00442\u0043e\u00439", "G9": "Yuan Renminbi"}, {"G1": "AUD", "G2": "036", "G3": "1", "G4": "7322.83", "G5": "11.08.2020", "G6": "\u00410\u00432\u00441\u00442\u00440\u00430\u0043b\u00438\u00439\u00441\u0043a\u00438\u00439 \u0043\u0043\u0043\u0043\u0040\u00440", "G7": "Avstraliya dollari", "G8": "\u00410\u00432\u00441\u00442\u00440\u00430\u0043b\u00438\u0044f", "G9": "Australian Dollar"}, {"G1": "ARS", "G2": "032", "G3": "1", "G4": "140.62", "G5": "11.08.2020", "G6": "\u00410\u00440\u00433\u00435\u0043d\u00442\u00438\u0043d\u00441\u0043a\u0043e\u00435 \u0043f\u00435\u00441\u0043e", "G7": "Argentina pesos", "G8": "\u00410\u00440\u00433\u00435\u0043d\u00442\u00438\u0043d\u00430", "G9": "Argentine Peso"}, {"G1": "AMD", "G2": "051", "G3": "1", "G4": "21.14", "G5": "11.08.2020", "G6": "\u00410\u00440\u0043c\u0044f\u0043d\u00441\u0043a\u00438\u00439", "G7": "Armaniston dram", "G8": "\u00410\u00440\u0043c\u00430\u0043d\u00438\u00441\u00442\u0043e\u0043d", "G9": "Armenian Dram"}, {"G1": "AFN", "G2": "971", "G3": "1", "G4": "133.45", "G5": "11.08.2020", "G6": "\u00410\u0044\u0043\u00430\u0043d\u00438", "G7": "Afg\u0042018oniston afg\u0042018onisi", "G8": "\u00410\u0044\u00493\u0043e\u0043d\u00438\u00441\u00442\u0043e\u0043d", "G9": "AF Afghani"}, {"G1": "AFD", "G2": "784", "G3": "1", "G4": "1385.81", "G5": "11.08.2020", "G6": "\u00411\u00438\u00440\u00445\u00430\u0043e", "G7": "Afg\u0042018oniston afg\u0042018onisi", "G8": "\u00411\u00438\u00440\u00445\u00430\u0043e", "G9": "AF Afghani"}]
```

Markaziy bank API bilan ishlash



The screenshot shows the Postman API client interface. The top bar includes a 'NEW' button, a 'Runner' button, an 'Import' button, and a 'Builder' button. A notification banner at the top states: 'Chrome apps are being deprecated. Download our free native apps for continued support and better performance. Learn more'. The left sidebar shows a 'History' tab with a collection named 'https://cbu.uz/oz/services/open_data/rates/json/'. The main panel displays a GET request to 'https://cbu.uz/oz/services/open_data/rates/json/'. The 'Authorization' tab is selected, showing 'No Auth'. The 'Body' tab is also selected, showing the response in JSON format. The response is a list of exchange rates for various currencies, including USD, EUR, and GBP. The status is '200 OK' and the time is '329 ms'.

GET https://cbu.uz/oz/services/open_data/rates/json/

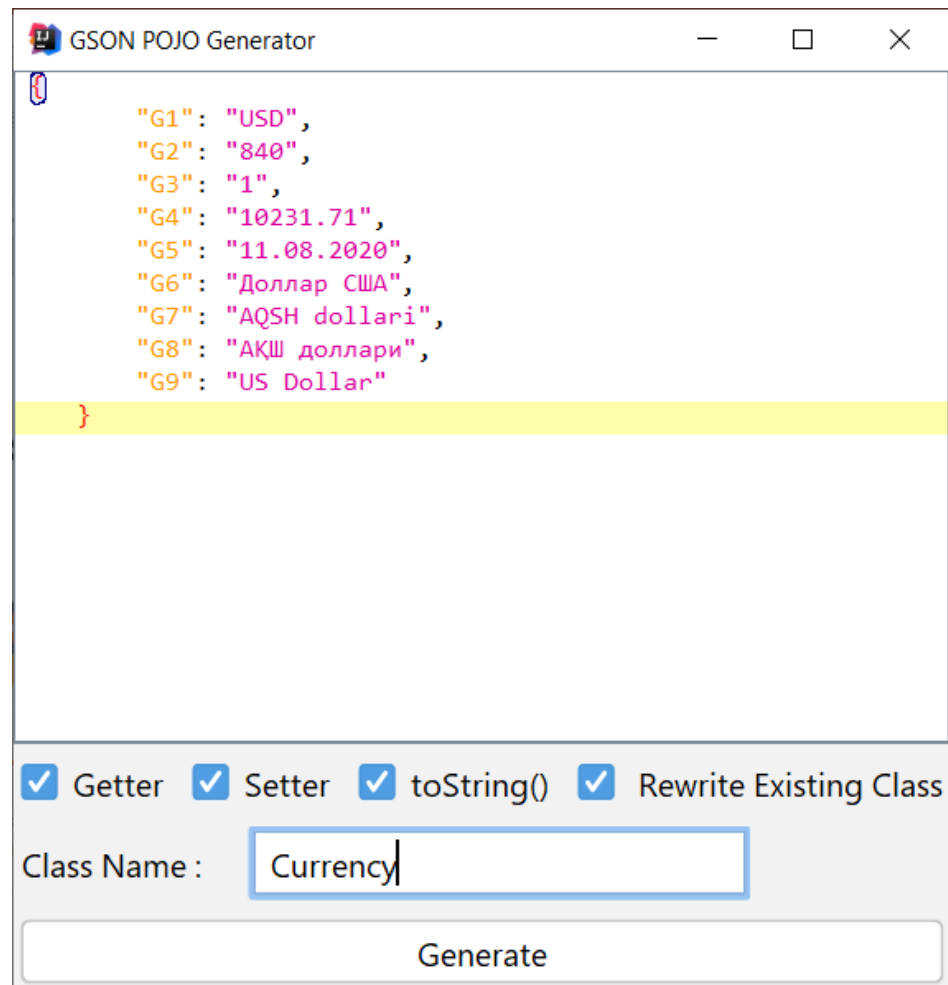
Authorization: No Auth

Body: Pretty Raw Preview JSON

```
1 {
2   {
3     "G1": "USD",
4     "G2": "840",
5     "G3": "1",
6     "G4": "10231.71",
7     "G5": "11.08.2020",
8     "G6": "Donnap CIA",
9     "G7": "AQSH dollari",
10    "G8": "AKSH donnap",
11    "G9": "US Dollar"
12  },
13  {
14    "G1": "EUR",
15    "G2": "978",
16    "G3": "1",
17    "G4": "12059.09",
18    "G5": "11.08.2020",
19    "G6": "Eвро",
20    "G7": "EVR0",
21    "G8": "EBPO",
22    "G9": "Euro"
23  },
24  {
25    "G1": "GBP",
26    "G2": "826",
27    "G3": "1",
28    "G4": "13353.40",
```

Status: 200 OK Time: 329 ms

Markaziy bank API bilan ishlash



GSON POJO Generator

```
{  
  "G1": "USD",  
  "G2": "840",  
  "G3": "1",  
  "G4": "10231.71",  
  "G5": "11.08.2020",  
  "G6": "Доллар США",  
  "G7": "AQSH dollari",  
  "G8": "AQSH dollari",  
  "G9": "US Dollar"  
}
```

☒ Getter ☒ Setter ☒ toString() ☒ Rewrite Existing Class

Class Name :

E'TIBORINGIZ UCHUN RAXMAT