

文章

Michael Lei · 八月 8 阅读大约需 2 分钟

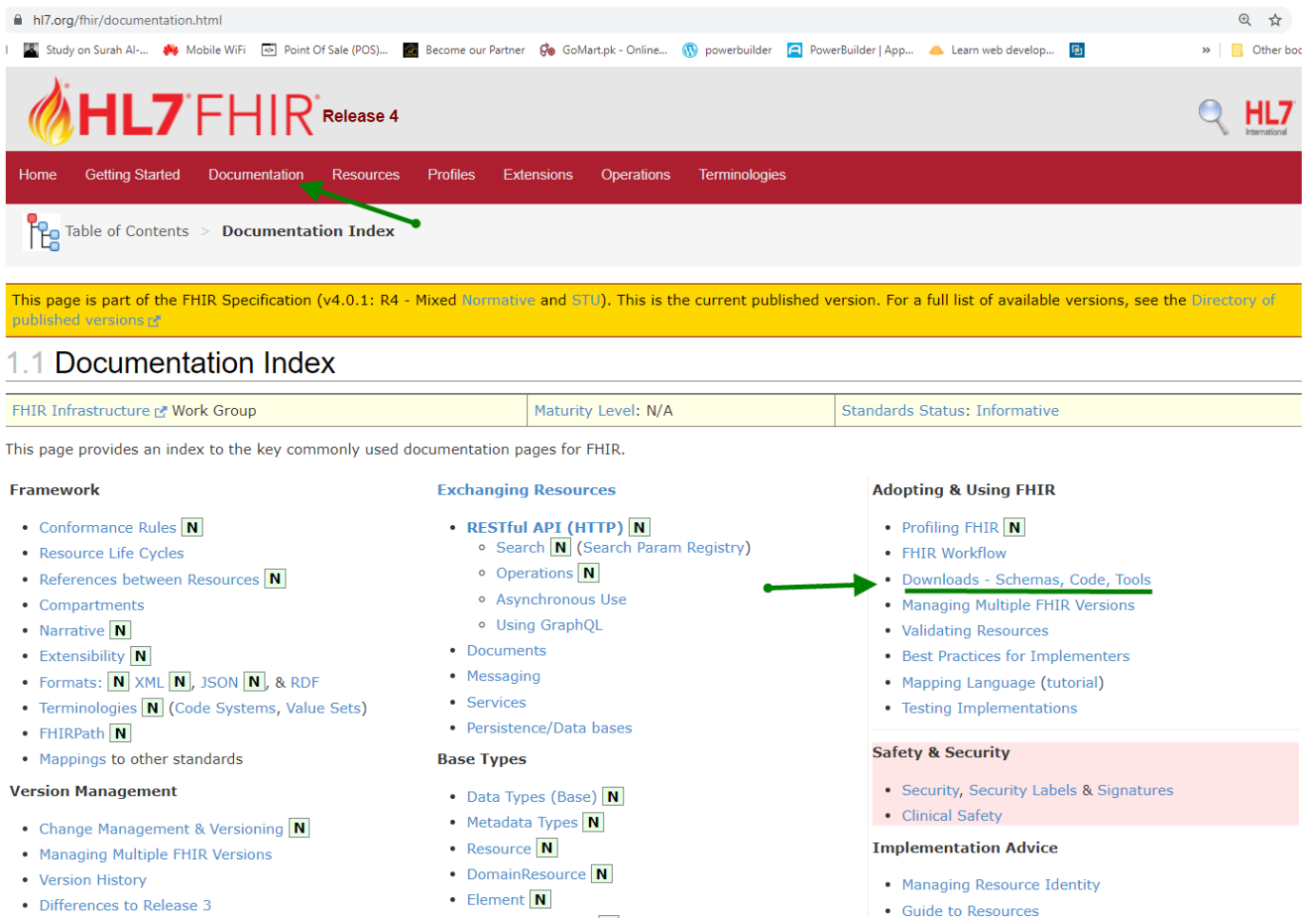
# FHIR 实操--借助VS Code 中的IntelliSense和自动完成功能，通过使用FHIR Schema创建和验证任何HL7 FHIR资源

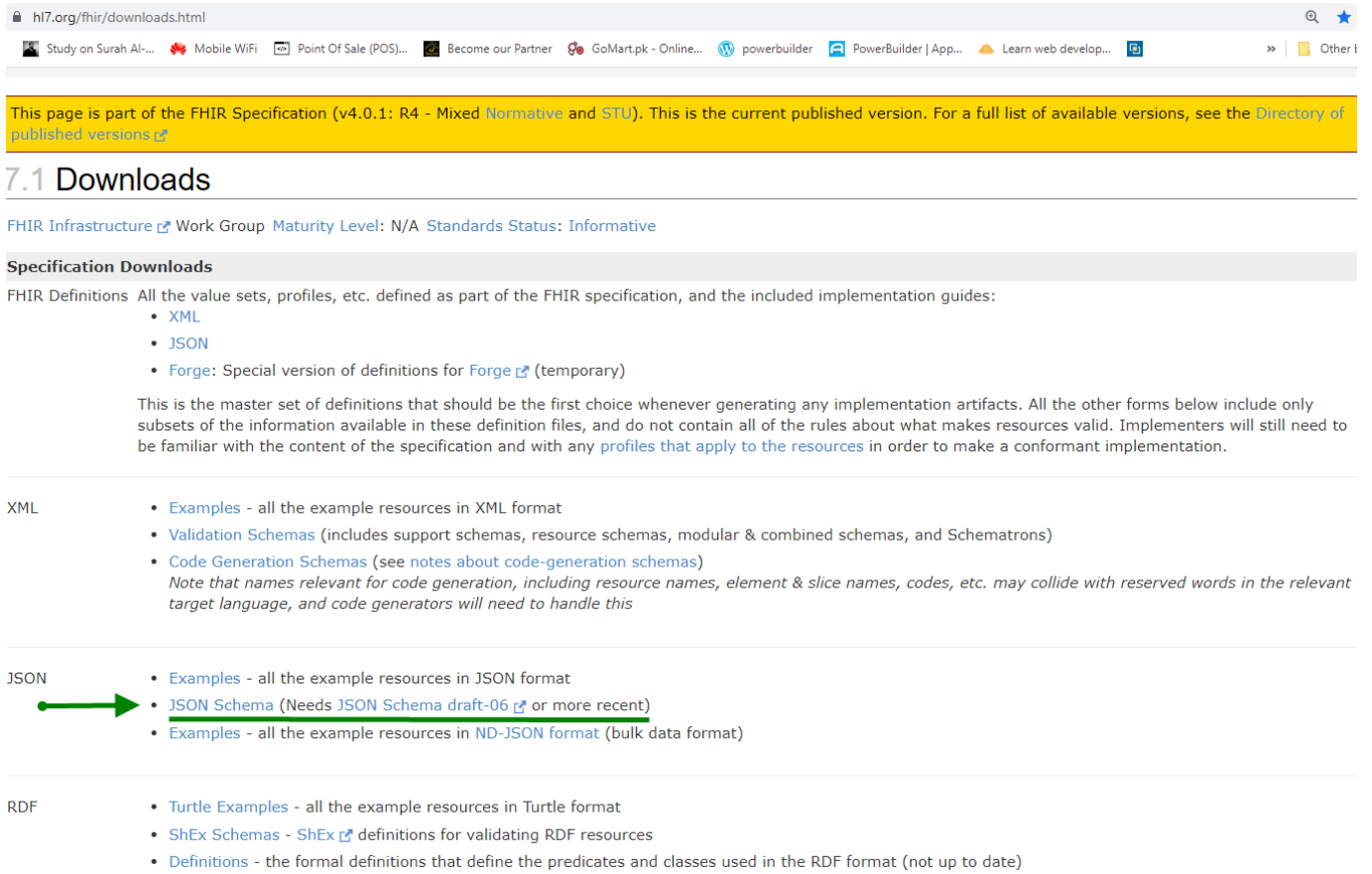
医疗行业的互操作性在改善病人护理、降低医疗服务提供者的成本以及为提供者提供更准确的情况方面发挥着重要作用。然而，由于有这么多的系统，数据的格式也有很多不同的方式。有许多标准被创造出来以试图解决这个问题，包括HL7v2、HL7v3和CDA，但每一种都有其缺点。

FHIR，即快速医疗互操作性资源，是一种新的医疗数据格式，旨在解决这些问题。它是由国际卫生级七组织（HL7）开发的，该组织还开发了HL7v2、HL7v3和CDA。

今天我们将探讨如何在VS代码中借助IntelliSense和自动完成功能，通过使用FHIR Schema 创建和验证FHIR资源。

**第 1 步** :从FHIR 官方网站 <https://www.hl7.org/fhir/>下载 JSON schema file 文件用来做资源校验





This page is part of the FHIR Specification (v4.0.1: R4 - Mixed Normative and STU). This is the current published version. For a full list of available versions, see the [Directory of published versions](#)

## 7.1 Downloads

FHIR Infrastructure [Work Group](#) Maturity Level: N/A Standards Status: Informative

### Specification Downloads

FHIR Definitions All the value sets, profiles, etc. defined as part of the FHIR specification, and the included implementation guides:

- XML
- JSON
- Forge: Special version of definitions for [Forge](#) (temporary)

This is the master set of definitions that should be the first choice whenever generating any implementation artifacts. All the other forms below include only subsets of the information available in these definition files, and do not contain all of the rules about what makes resources valid. Implementers will still need to be familiar with the content of the specification and with any [profiles that apply to the resources](#) in order to make a conformant implementation.

XML

- Examples - all the example resources in XML format
- Validation Schemas (includes support schemas, resource schemas, modular & combined schemas, and Schematrons)
- Code Generation Schemas (see [notes about code-generation schemas](#))  
*Note that names relevant for code generation, including resource names, element & slice names, codes, etc. may collide with reserved words in the relevant target language, and code generators will need to handle this*

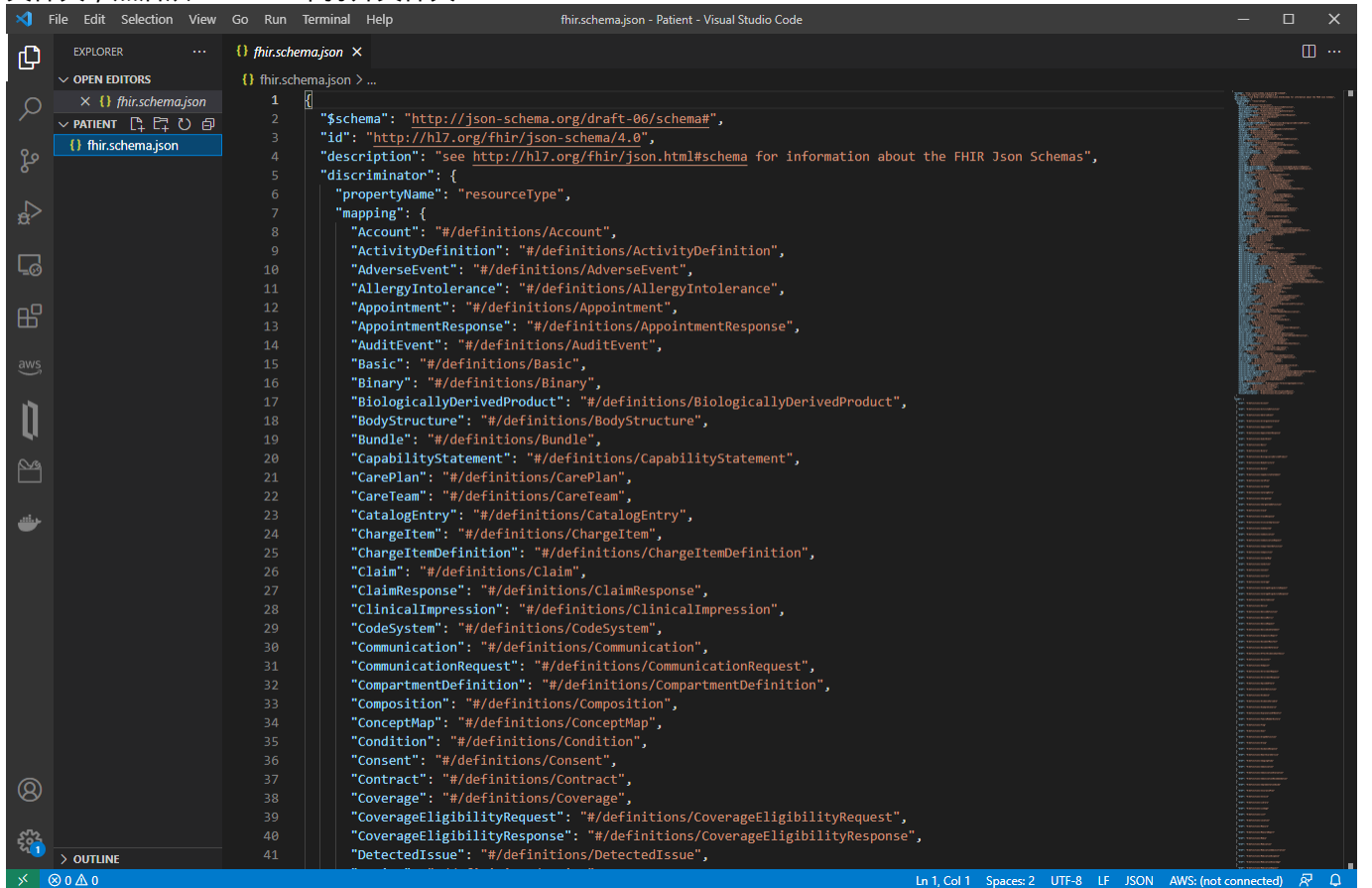
JSON

- Examples - all the example resources in JSON format
- JSON Schema (Needs [JSON Schema draft-06](#) or more recent)
- Examples - all the example resources in ND-JSON format (bulk data format)

RDF

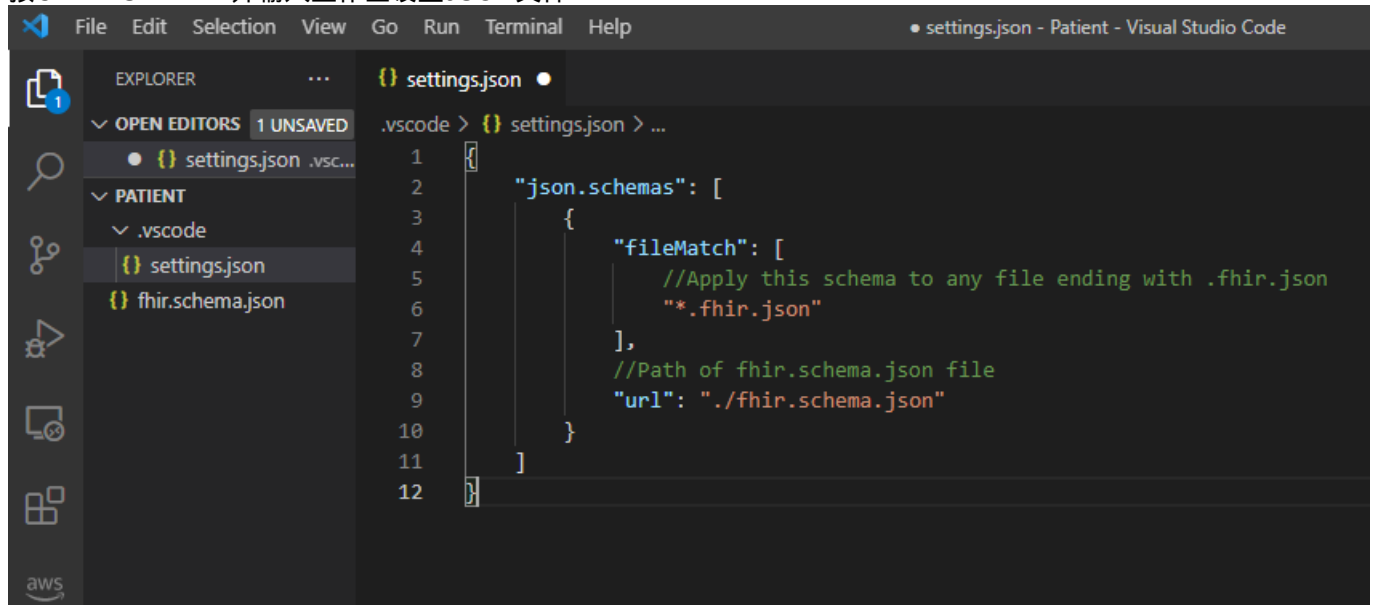
- Turtle Examples - all the example resources in Turtle format
- ShEx Schemas - [ShEx](#) definitions for validating RDF resources
- Definitions - the formal definitions that define the predicates and classes used in the RDF format (not up to date)

第 2 步: 创建文件夹 (在这个例子中, 我使用病人文件夹和病人资源), 并将提取的fhir.schema.json文件复制到同一文件夹, 然后从VS Code中打开文件夹

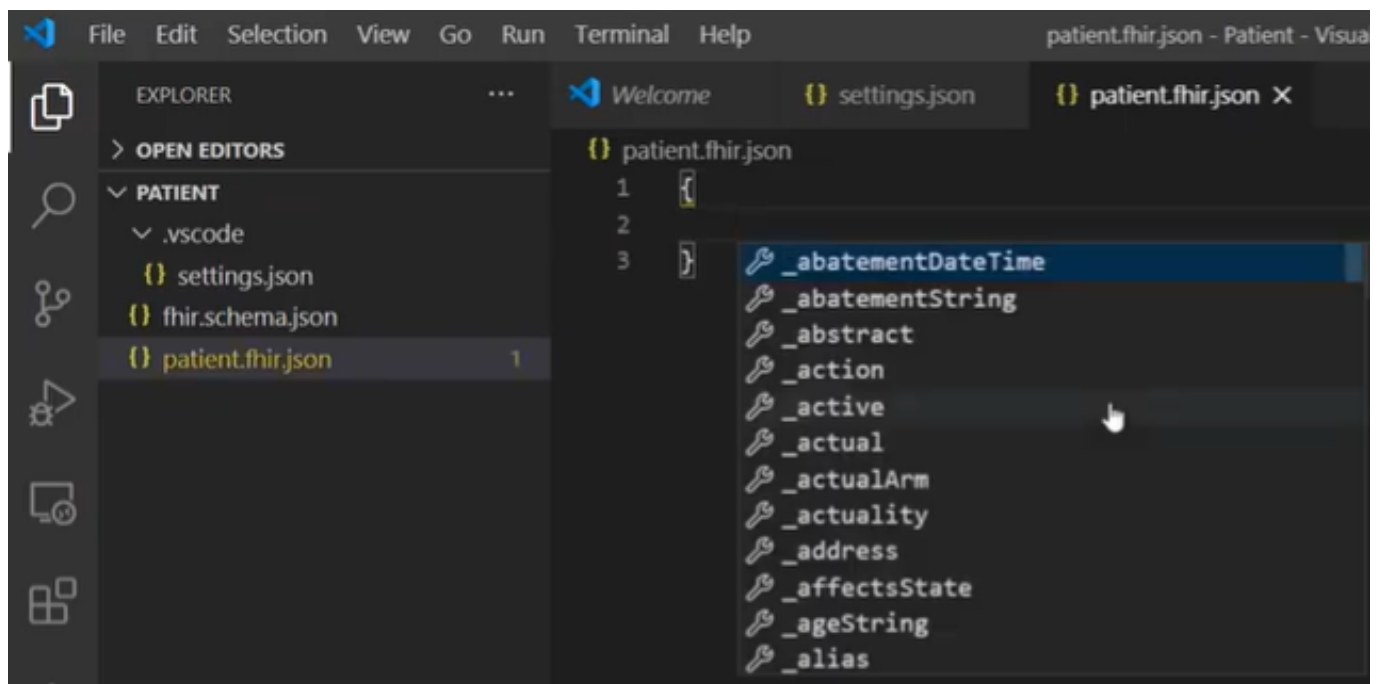


第 3 步: 通过修改setting.json文件, 设置VS代码以识别FHIR模式。

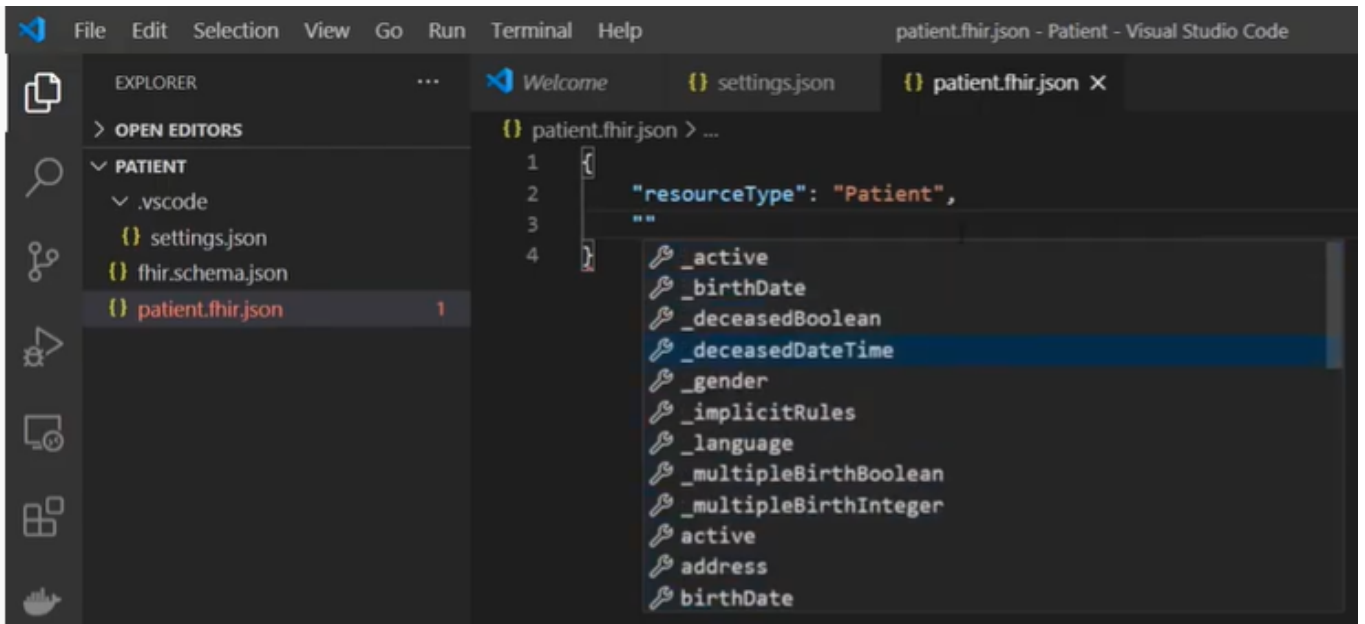
按CTRL+SHIFT+P并输入工作区设置JSON文件



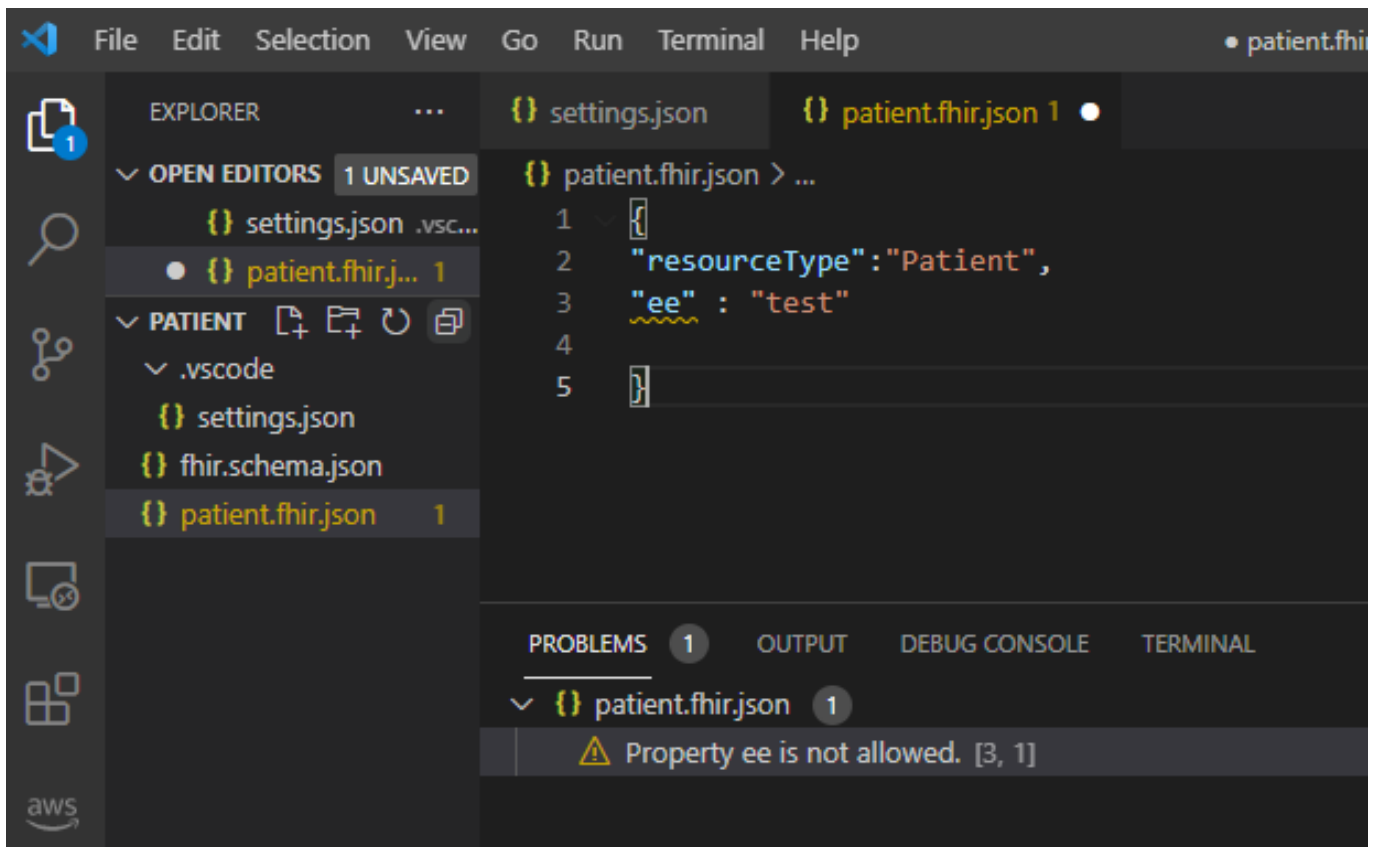
第 4 步: 在同一文件夹中创建一个新文件patient.fhir.json。  
按Ctrl+Space，你将通过IntelliSense获得FHIR资源的所有属性



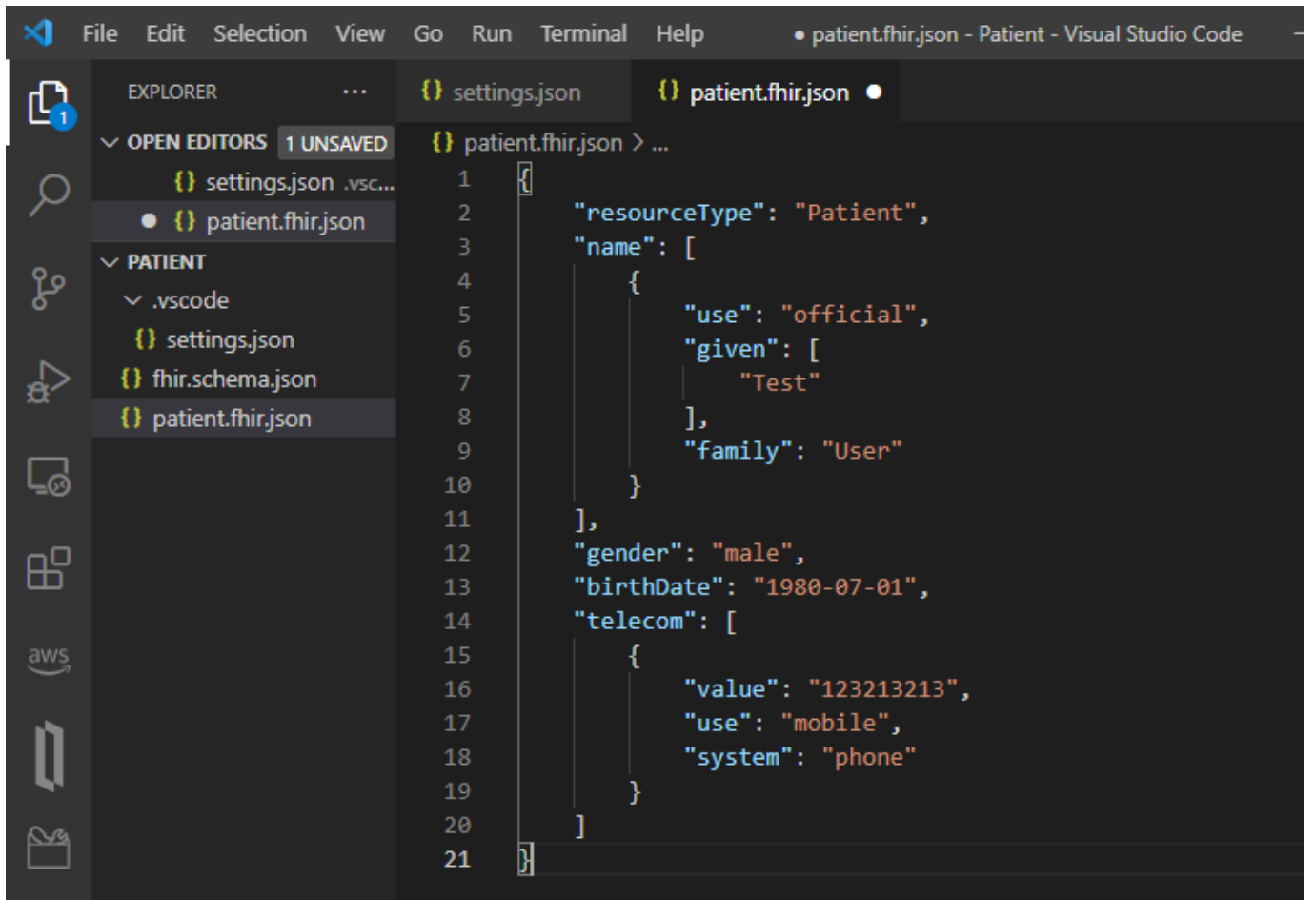
添加资源类型 "病人"，与病人资源有关的所有属性将出现在IntelliSense中。



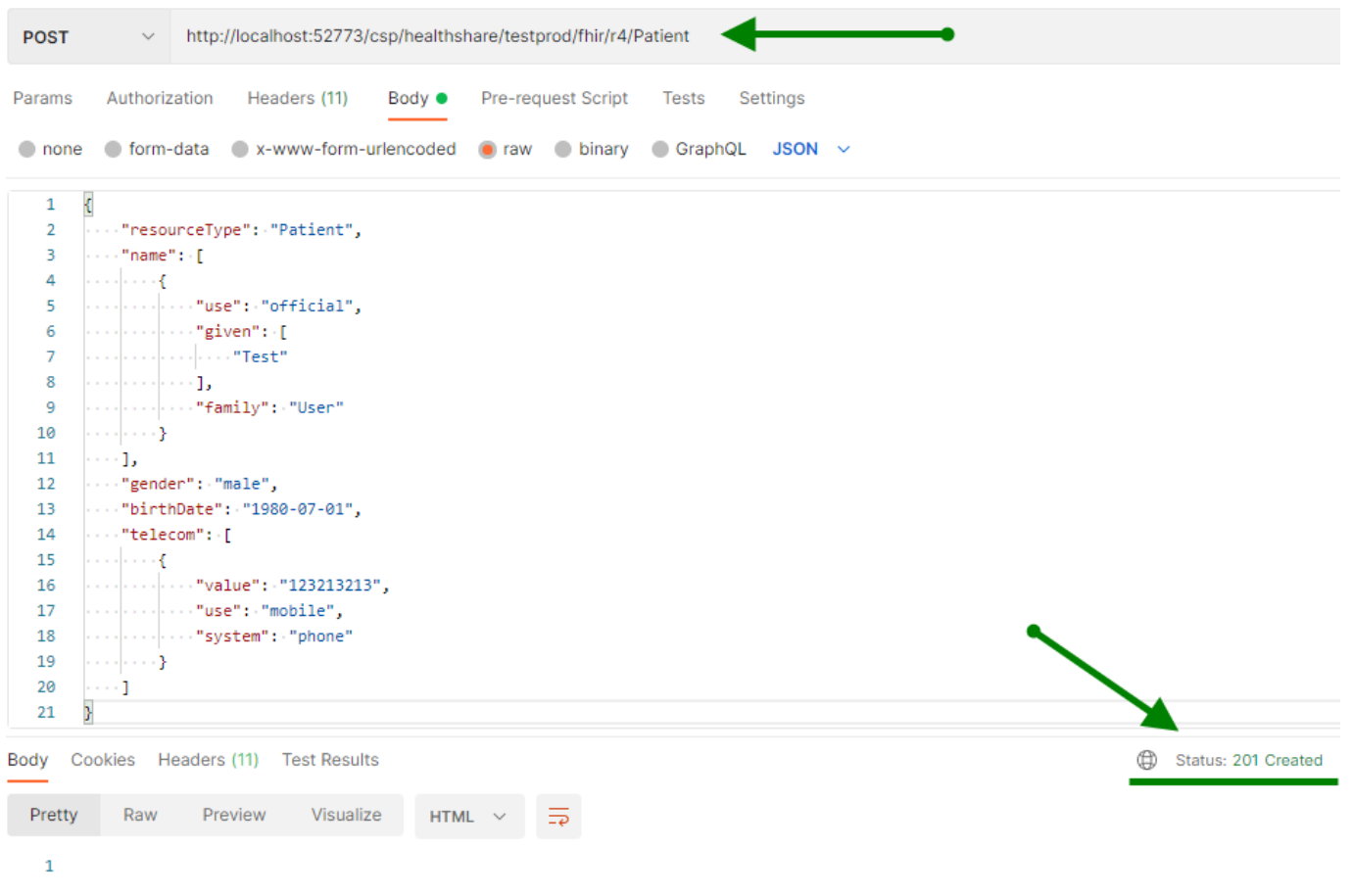
VS Code 讲自动校验资源的结构和语法。



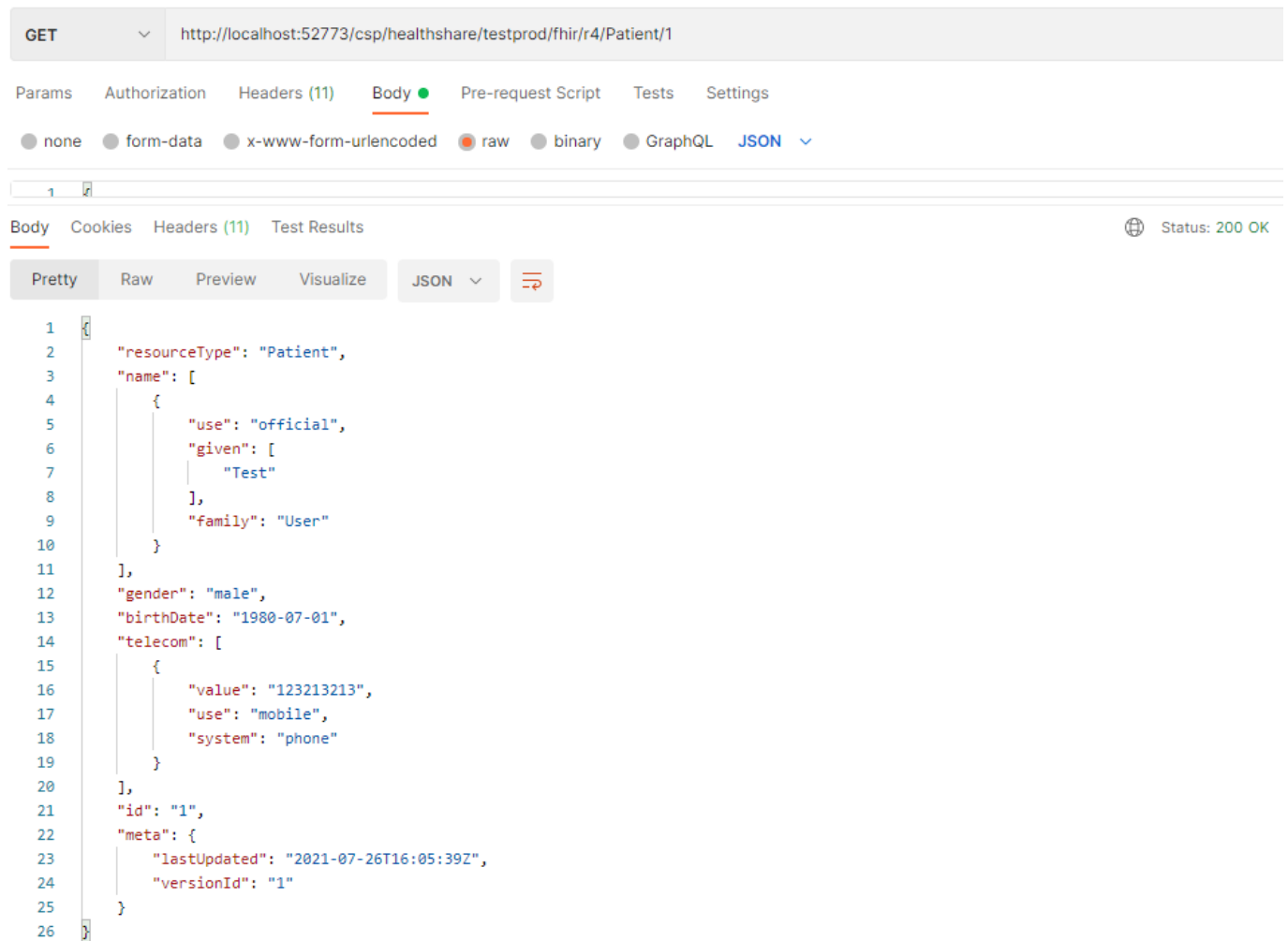
在IntelliSense和自动完成的帮助下，我们已经创建并验证了我们的病人资源。



### 第 5 步: 使用Postman的Rest API在InterSystems FHIR服务器上发布创建资源。



通过使用获取方法检索已创建的病人资源。



The screenshot shows a Postman interface for a GET request to `http://localhost:52773/csp/healthshare/testprod/fhir/r4/Patient/1`. The response body is displayed in JSON format, showing a patient resource with the following details:

```
1 {
2   "resourceType": "Patient",
3   "name": [
4     {
5       "use": "official",
6       "given": [
7         "Test"
8       ],
9       "family": "User"
10    }
11  ],
12  "gender": "male",
13  "birthDate": "1980-07-01",
14  "telecom": [
15    {
16      "value": "123213213",
17      "use": "mobile",
18      "system": "phone"
19    }
20  ],
21  "id": "1",
22  "meta": {
23    "lastUpdated": "2021-07-26T16:05:39Z",
24    "versionId": "1"
25  }
26 }
```

恭喜你！，我们已经创建、验证了我们的病人资源，并成功地使用postman发布和检索到InterSystems FHIR服务器。

通过这种方式，我们可以轻松地创建和验证任何FHIR资源。

[#FHIR](#) [#REST API](#) [#Caché](#) [#Ensemble](#) [#InterSystems IRIS for Health](#) [#VSCode](#)

## 源

URL:<https://cn.community.intersystems.com/post/fhir-%E5%AE%9E%E6%93%8D-%E5%80%9F%E5%8A%A9vs-code-%E4%B8%AD%E7%9A%84intellisense%E5%92%8C%E8%87%AA%E5%8A%A8%E5%AE%8C%E6%88%90%E5%8A%9F%E8%83%BD%EF%BC%8C%E9%80%9A%E8%BF%87%E4%BD%BF%E7%94%A8fhir-schema%E5%88%9B%E5%BB%BA%E5%92%8C%E9%AA%8C%E8%AF%81%E4%BB%BB%E4%BD%95hl7-fhir%E8%B5%84%E6%BA%90>