**HOW TO IMPLEMENT FHIR IN PYTHON**

**What is FHIR?**

Fast Healthcare Interoperability Resources is a standard describing data formats and elements and an application programming interface for exchanging electronic health records. The standard was created by the Health Level Seven International health-care standards organization.

**WHAT IS HAPI?**

LINKS:

<http://hapi.fhir.org> (FHIRIMPLEMENTED DATABASE DEMO)

[**https://github.com/hapifhir/hapi-fhir-jpaserver-starter.git**](https://github.com/hapifhir/hapi-fhir-jpaserver-starter.git)(IMPLEMENTED DATABASE)

description:

HAPI is Opensource FHIR implementation Server to store the data. In simple words it is a FHIR management tool where you can manage the FHIR resources and can perform CRUD operations.

It gives you an online DEMO where you can test it link is above.

**IMPLEMENTATION:**

**Links:**

[**https://github.com/aloalqma/firstcare.git**](https://github.com/aloalqma/firstcare.git)(Project link)

[**http://hl7.org/fhir/resourcelist.html**](http://hl7.org/fhir/resourcelist.html)(FHIR website link)

<https://pypi.org/project/fhirpy/> (FHIRPYpypi)

for the overview of the fhirclient you can visit the (FHIRPYpypi) for the detail documentation

1. go to the above Project link and see the project.
2. Go to the FHIR folder (<https://github.com/aloalqma/firstcare/tree/main/FHIR>)

**How to use FHIR models in the python?**

when you get the brief understanding of FHIR resources and FHIRPY.

Example:

You want to use the Patient Resource of FHIR in the python.

From fhirpy import AsyncFHIRClient

*from* fhirpy *import* AsyncFHIRClient

*import* asyncio

client = AsyncFHIRClient(FHIR\_ENDPOINT,*authorization*=FHIR\_AUTHORIZATION)

class FHIRPatient:

def \_\_init\_\_(*self*):

*self*.patient = None

async def getPatient(*self*,*National\_id*):

patient = *await* client.reference('Patient',*National\_id*).to\_resource()

*self*.patient = patient

*return* *self*.patient.serialize()

Above code will send a query on the FHIR IMPLEMENTATION and store the information that is provided on the HAPI server.

If you need more details, you can visit the

<https://github.com/aloalqma/firstcare/blob/main/FHIR/fhir.py>

We have different classes and each class has different function.

For example:

FHIRPatient

In FHIRPatient we have two functions *getPatient(*National\_id*) and createPatient(data)*

In getPatient we can get the patient from the FHIR server(HAPI) and in the createPatient we can create the patient in the FHIR server(HAPI).

**HOW TO USE THE FHIRPatient class in any module of the project.**

*import FHIRPatient from FHIR.fhir*

*fhir\_patient = FHIRPatient()*

*response = fhir\_patient.createPatient(data=patient)*

*print(response)*