

Article

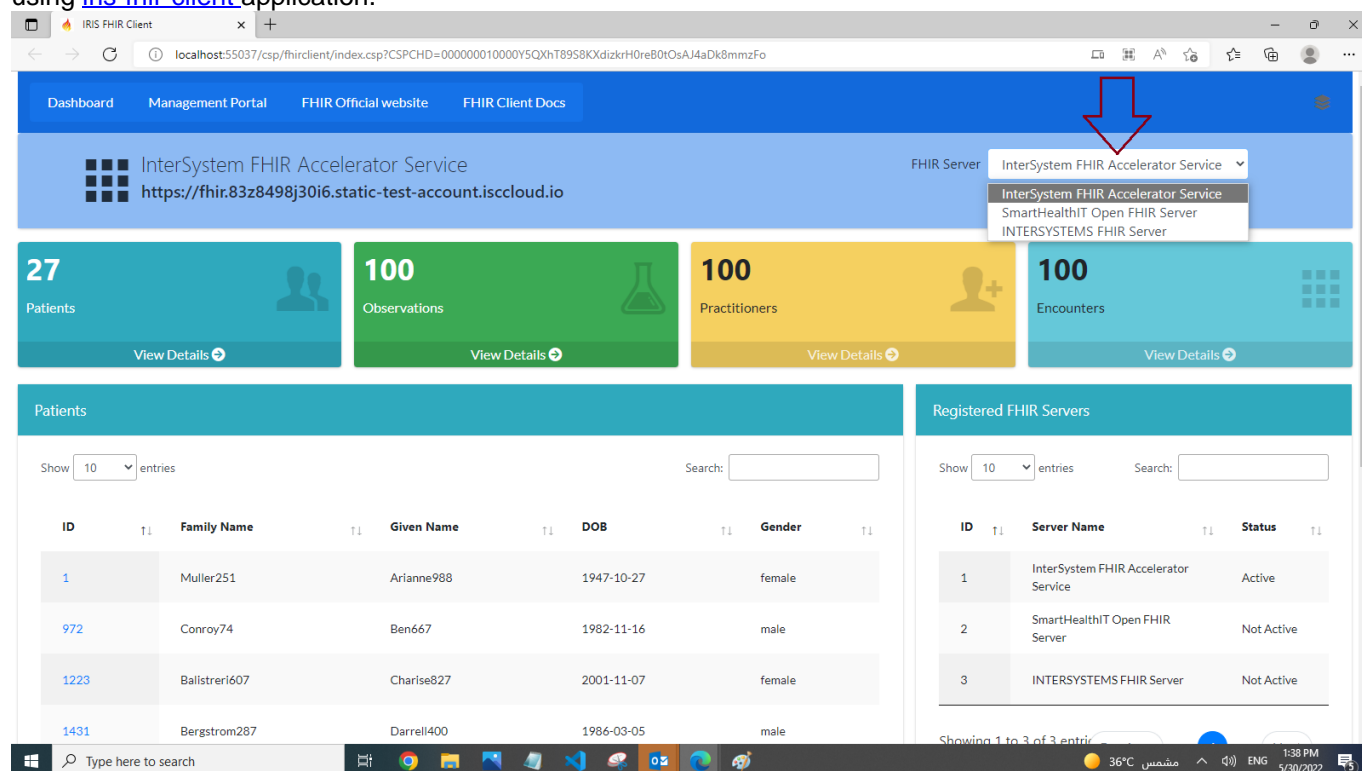
[Muhammad Waseem](#) · Jun 4, 2022 3m read

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Creating Patient and Patient Observations by using iris-fhir-client application

Hi Community,

This article will demonstrate how to create Patient and Patient Observation Resources by using [iris-fhir-client](#) application.



I recommend to read my [first article](#) about this app and watch [Youtube Video](#) before continue

so let's start

1-Create Patient Resource

below CreatePatient() function of dc.FhirClient can be use to Create Patient Resource

```
ClassMethod CreatePatient(givenName As %String, familyName As %String, birthDate As %String,gender As %String)
```

function requires giveName,failyName,birthDate and gender to create Patient Resource
below command will create Patient

```
do ##class(dc.FhirClient).CreatePatient("PatientGN","PatientFN","2000-06-01","male")
```

```
USER>do ##class(dc.FhirClient).CreatePatient("PatientGN","PatientFN","2000-06-01","male")
Patient Created Successfully
```

Below is the python function in fhirclient.py file which will create patient

```
import json
from fhirpy import SyncFHIRClient
from tabulate import tabulate
from fhirpy.base.searchset import Raw
import requests

def CreatePatient(givenName,familyName,birthDate,gender,url,api_key):
    headers = {"Content-Type":contentType,"x-api-key":api_key}
    client = SyncFHIRClient(url = url, extra_headers=headers)

    patient = client.resource("Patient")
    patient['name'] = [
        {
            'given': [givenName],
            'family': familyName,
            'use': 'official'
        }
    ]

    patient['birthDate'] = birthDate
    patient['gender'] = gender
    try:
        patient.save()
    except Exception as e:
        print("Error while creating Patient:" +str(e))
        return
    print("Patient Created Successfully")
```

2- Create Patient Observation Resource

Let us create Observation against our newly created Patient Resource

below CreateObservation() function of dc.FhirClient can be use to Create Patient Observations

```
ClassMethod CreateObservation(patientId As %String, loincCode As %String, ObrCategory
As %String, ObrValue As %Integer, ObrUOM As %String, effectiveDate As %String)
```

Parametres

- patientId is the Id of Patient
- LoincCode is Loinc Code, Detail can be found [here](#)
- ObrCategory is Observation Category, Detail can be found [here](#)
- ObrValue is Observatoion Value
- ObrUOM is Observation Unit
- EffectiveDate

below command will create Patient Vital Sign Observation

```
do ##class(dc.FhirClient).CreateObservation("8111","8310-5","vital-
```

```
signs",96.8,"degF","2022-01-22")
```

```
USER>do ##class(dc.FhirClient).CreateObservation("8111","8310-5","vital-signs",96.8,"degF","2022-01-22")
Patient Observation Created Successfully
Let's List down patient observations
```

```
do ##class(dc.FhirClient).GetPatientResources("Observation","8111")
```

```
USER>do ##class(dc.FhirClient).GetPatientResources("Observation","8111")
  ID  Category      Code      Value  UOM    Date      Patient
  ---  -
8114  vital-signs      8310-5    96.8   degF    2022-01-22  Patient/8111
```

Below is the python function in irisfhirclient.py file which will create patient

```
import json
from fhirpy import SyncFHIRClient
from tabulate import tabulate
from fhirpy.base.searchset import Raw
import requests

#Function to create Patient Observation
def CreateObservation
(patientId,loincCode,ObrCategory,ObrValue,ObrUOM,effectiveDate,url,api_key):
    headers = {"Content-Type":contentType,"x-api-key":api_key}
    client = SyncFHIRClient(url = url, extra_headers=headers)
    observation = client.resource(
        'Observation',
        status='preliminary',
        category=[{
            'coding': [{
                'system': 'http://hl7.org/fhir/observation-category',
                'code': ObrCategory
            }]
        }],
        code={
            'coding': [{
                'system': 'http://loinc.org',
                'code': loincCode
            }]
        })
    observation['effectiveDateTime'] = effectiveDate

    observation['valueQuantity'] = {
        'system': 'http://unitsofmeasure.org',
        'value': ObrValue,
        'code': ObrUOM
    }

    #find the patient
    patient = client.resources('Patient').search(_id=patientId).first()
    observation['subject'] = patient.to_reference()

    try:
        observation.save()
    except Exception as e:
        print("Error while creating observation :"+ str(e))
```

```
    return  
    print("Patient Observation Created Successfully")
```

That's it

If you found this app useful, consider voting for my app.

Thanks

[#Embedded Python](#) [#FHIR](#) [#InterSystems](#) [IRIS for Health](#)
[Check the related application on InterSystems Open Exchange](#)

Source

URL:<https://community.intersystems.com/post/creating-patient-and-patient-observations-using-iris-fhir-client-application>