

```
"resourceType" : "Patient"
"text" : {
  "status" : "generated"
  "_status" : {
    "id" : "12344"
  },
  "div" : "<div
},
"identifier"
{
  "use"
  "ty
```

# FHIR FUNDAMENTALS COURSE

**FAST  
HEALTHCARE  
INTEROPERABILITY  
RESOURCES**



## FHIR COURSE

### Introduction to FHIR – CRUD Operations

How to submit your activity

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## Activity Overview

In this Activity, you will practice creating, updating and retrieving FHIR Resources.

# 1. Introduction

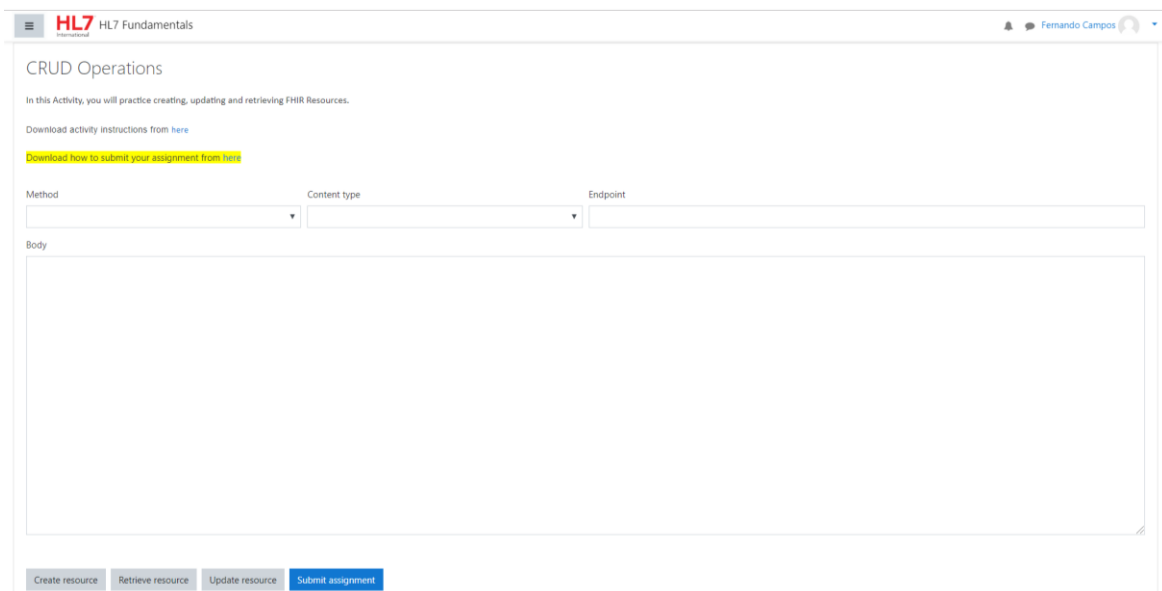
Please do the following FHIR exercises.

FHIR SERVER : <http://fhirserver.hl7fundamentals.org/fhir>

## Task 1: Add a new Resource (Make a POST)

Using the Patient Resource you have created in the first week, save the resource making a POST to the FHIR Server. Make sure the new Resource is successfully saved.

Edit your submission and you will face a form like this:

The screenshot shows a web interface titled "HL7 Fundamentals" with a user profile "Fernando Campos". The main section is "CRUD Operations" with a subtext: "In this Activity, you will practice creating, updating and retrieving FHIR Resources." There are two links: "Download activity instructions from here" and "Download how to submit your assignment from here". Below these are three input fields: "Method" (a dropdown menu), "Content type" (a dropdown menu), and "Endpoint" (a text input field). Below these fields is a large text area labeled "Body". At the bottom, there are four buttons: "Create resource" (disabled), "Retrieve resource" (disabled), "Update resource" (disabled), and "Submit assignment" (active).

#1 Select the method.

#2 Select the content-type you will send to the server.

#3 Complete the FHIR endpoint

#4 Paste your resource in the body.

#5 Press Create resource.

You will receive feedback for the operation. You can try many times until you complete this first part. Read carefully the feedback provided by the campus and from the FHIR server. You can make the necessary changes and try again.

If you do not understand the feedback provided, use the forum to get help from tutors or other students. You can paste the feedback in the post.

If you still don't make it, **do not worries**, but you should email your tutor with the resource you are trying to save in the FHIR server and a screenshot with the feedback received. This is because the following exercises depend on the first one.

When you success the task, you will receive a feedback like this:

Create resource
Retrieve resource
Update resource
Submit assignment

**Grade: 4, Feedback :**  
Perfect. You have created the resource.. Go to the next operation. Remember you will need the assigned resource id to retrieve it.

**Server Response**

```

Content-Location: http://fhirserver.hl7fundamentals.org/fhir/Patient/20790/_history/1
</br>
{
  "resourceType": "Patient",
  "id": "20790",
  "meta": {
    "versionId": "1",
    "lastUpdated": "2023-07-27T20:25:34.946+00:00"
  },
  "text": {

```

POST : Content-Location: http://fhirserver.hl7fundamentals.org/fhir/Patient/20790/\_history/1

## Task 2: Get a FHIR Resource (Make a GET)

GET the FHIR Resource using the ID that has been assigned by the server to your resource.

Method	Content type	Endpoint
<input type="text"/>	<input type="text"/>	<input type="text" value="http://fhirserver.hl7fundamentals.org/fhir/Patient/...."/>

To get your resource you need to select the correct operation and complete the URL.

#1 Select the method

#2 Complete the URL with the parameters to get your resource by ID. (TIP: You can check the content-location when you create the resource to know the ID assigned.)

#3 Press Retrieve resource.

You should receive feedback like this:

Create resource
Retrieve resource
Update resource
Submit assignment

**Grade: 7, Feedback :**  
Perfect. You have created and retrieved your resource. Go to the next operation. Remember you need to include the assigned id in the resource and in the URL to update it.

**Server Response**

```

{
  "resourceType": "Patient",
  "id": "20790",
  "meta": {
    "versionId": "1",
    "lastUpdated": "2023-07-27T20:25:34.946+00:00",
    "source": "#M7QmUDNQuFCi5uCX"
  },
  "text": {
    "status": "generated",

```

### Task 3: Update the Resource (Make a PUT)

Using the Resource you retrieved in task 2, alter the line, city, state and telecom to different ones and send your edited resource for update to the server.

Method	Content type	Endpoint
<input type="text" value="PUT"/>	<input type="text" value="application/json"/>	<input type="text" value="http://fhirserver.hl7fundamentals.org/fhir/Patient/...."/>

Body

```
{
  "resourceType": "Patient",
  "id": "20790",
  "meta": {
    "versionId": "1",
    "lastUpdated": "2023-07-27T20:25:34.946+00:00",
    "source": "#M7QmUDNQuFCi5uCX"
  },
  "text": {
    "status": "generated",
    "div": "<div xmlns='http://www.w3.org/1999/xhtml'><div class='hapiHeaderText'>fernando <b>CAMPOS </b></div><table class='hapiPropertyTable'><tbody><tr><td>Identifier</td><td>fernando.campos</td></tr></tbody></table></div>"
  },
  "identifier": [ {
    "system": "https://clin.fhir.com/fhir/NamingSystem/identifier",
    "value": "fernando.campos"
  } ],
  "name": [ {
    "use": "official",
    "text": "Fernando Campos",
  } ],
}
```

To update your resource you will need:

- #1 Select the correct method
- #2 Indicate the content-type
- #3 Indicate the endpoint
- #4 Edit the line, city, state and telecom to different ones.
- #5 Press Update resource button.

You should receive a feedback like this:

Create resource

Retrieve resource

Update resource

Submit assignment

**Grade: 10, Feedback :**

Amazing. You have created, retrieved and updated your resource. You are done! Submit your assignment.

POST : Content-Location: [http://fhirserver.hl7fundamentals.org/fhir/Patient/20790/\\_history/1](http://fhirserver.hl7fundamentals.org/fhir/Patient/20790/_history/1)

GET : <http://fhirserver.hl7fundamentals.org/fhir/Patient/20790>

PUT : Content-Location: [http://fhirserver.hl7fundamentals.org/fhir/Patient/20790/\\_history/2](http://fhirserver.hl7fundamentals.org/fhir/Patient/20790/_history/2)

After that, press Submit assignment to be graded.

**Note:** You can practice and test these exercises at any test FHIR server using your REST Client.

## Activity Summary

After successfully completing this Activity, you will have basic knowledge how to manage FHIR Resources.