

CAL2CAL

web based medical application

E-Health solutions represent the future of the medical system. Electronic prescriptions, telemedicine, online scheduling systems, are some of the most common features that eHealth solutions bring to hospitals and medical centres. Thus, in order to increase the healthcare system efficiency as a whole, it has to keep up with the latest innovations.

In order to interconnect all these medical data processing systems and to enable a bidirectional communication, there must be a common standard language. This abstraction and common language is provided by HL7 with the latest version of ISO / ANSI HL7 FHIR, a set of interoperability standards using message exchange between medical computer applications handling medical, clinical and administrative data.

FHIR is made up of different resources, each resource representing a component of the medical flow. For example, the Patient resource is used to define patients, Practitioner resource defines medical staff, Questionnaire defines the questions created by Practitioner, QuestionnaireResponse resource is used to collect the answers from Patients. Each of this resource and others not mentioned here are represented as a JSON or XML for data representation.

The HL7 compliant application is composed of several modules, such as: the module for creating questions, the module for collecting answers, for creating patients, for creating users (doctors, nurses, managers). In addition to these main modules, we can also mention the modules for skip logic creation, displaying answers based statistics, roles and users creation.

THE QUESTION CREATION MODULE

This module helps users to create different questions and save them according to the HL7 FHIR format

Create questionnaire form

Adult vaccination triage questionnaire	H Form Title
Do you have any health issues at this time such as fever and / or symptoms similar to flu? <input type="radio"/> Yes <input type="radio"/> No	Text Field
Do you know about drug allergies? <input type="radio"/> Yes <input type="radio"/> No	Checkbox
You have chronic health problems such as diseases heart, lung disease, kidney disease, diabetes, anemia or other blood diseases? <input type="radio"/> Yes <input type="radio"/> No	Boolean
Specify what illness / diseases you have <input type="text"/>	Date Field
Specify if you have any of the following conditions <input type="checkbox"/> Cancer <input type="checkbox"/> Leukemia	Clear {...}
	Save

THE ANSWER COLLECTION MODULE

This module helps users to collect answers. The module will take the specified question from the database, apply the skip logic rules and send the answer to the database where it will be saved in HL7 FHIR format.

Questionnaire Adult vaccination triage questionnaire

903 - Doe Jane

Do you have any health issues at this time such as fever and / or symptoms similar to flu?

- Yes
- No

Do you know about drug allergies?

- Yes
- No

You have chronic health problems such as diseases heart, lung diseases, kidney diseases, diabetes, anemia or other blood diseases?

- Yes
- No

Specify what illness / diseases you have

Specify if you have any of the following conditions

Cancer

Leukemia

HIV / AIDS

THE PATIENT CREATION MODULE

This module will help users to create the patients who are supervised by healthcare professionals. Like the previous modules, this module will save the data in the database according to the HL7 FHIR standard.

Patient informations

Gender

M

F

 

Contact person

UPLOAD MODULE

This module helps users to create questions by uploading a pdf file. The content of the file should have the following syntax:

<question number> <question> <question mark>

E.g:

1 Do you drink or eat 3 servings of calcium-rich foods daily, such as milk, cheese, yogurt, soy milk, or tofu?

