Shanoir NG – Import

Software Design Description

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# Microservice context

## Microservice presentation

This microservice is a part of the Shanoir-NG application and is used to import data.

## Main functionalities

Shanoir NG main functionalities are:

* Import from DICOM CD/DVD
* Import from PACS
* Import from ShanoirUploader
* Import processed dataset (NifTi)
* Import from files

## Application users

Target population is:

* Administrators
* Experts
* Users

# Functional architecture

## Imports

### Import from DICOM CD/DVD

Steps of this import are:

* Choose modality
* Upload dataset (DICOM zip)
* Select series
* Select clinical context
* Anonymization
* Nifti conversion
* Select settings for research study

### Import from PACS

Steps of this import are:

* Choose modality
* Define DICOM query and import data
* Select clinical context
* Anonymization
* Nifti conversion
* Select settings for research study

### Import from ShanoirUploader

Steps of this import are:

* Choose modality
* Upload files
* Anonymization
* Select series
* Nifti conversion

### Import processed dataset (NifTi)

Steps of this import are:

* Upload files
* Describe dataset
* Select/create data processing
* Nifti conversion

### Import from files

Import from files allows to upload:

* Processed dataset (NifTi)
* Extra data
* Spectroscopy data

Steps to import processed dataset are:

* Upload files
* Describe dataset
* Select/create data processing
* Nifti conversion

Steps to import extra data are:

* Upload files
* Select clinical context

Steps to import spectroscopy data are:

* Upload files
* Select clinical context

## Steps

### Choose modality

### Upload files

### Select series

### Select clinical context

### Describe dataset

### Select/create data processing

### Anonymization

### Nifti conversion

### Select settings for research study

# Software/technical Architecture

## Anonymization

### Anonymized fields :

See anonymization.xlsx document

### Prerequisite

Zip files should be unzipped.

Check if zip files are unzipped during anonymization step or before.

### Steps

* Anonymization
* Send email
* Create folders

### Technical Specification of Shanoir NG Anonymization

To anonymize a DICOM image, the anonymization service reads the set of DICOM tags to anonymize, reads the DICOM tags of the image then anonymizes each tag specified in the image that should be anonymized based on the recommendation of the DICOM norm as depicted by figures 1, 2, 3 and 4.

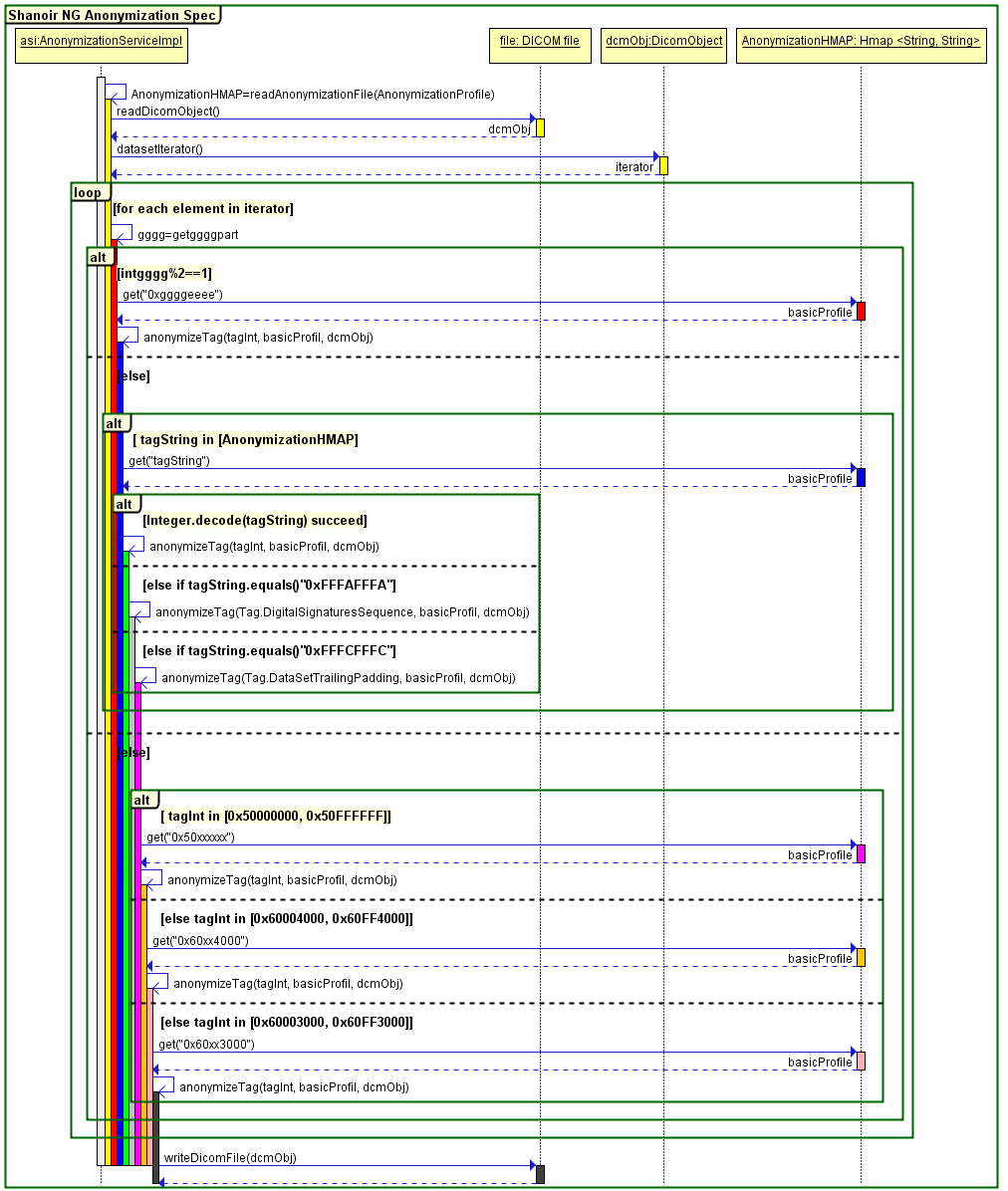


Figure 1. DICOM image anonymization process

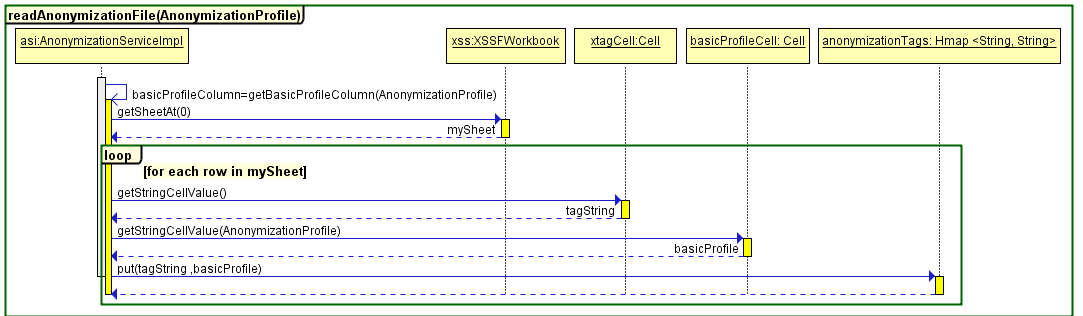


Figure 2. Excel anonymization tags file reading

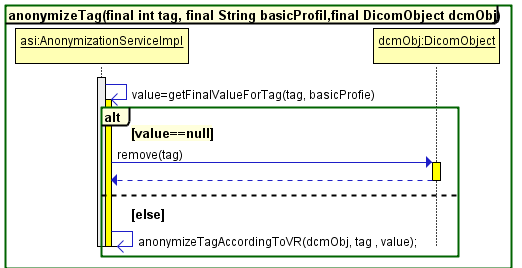


Figure 3. DICOM tag anonymization process

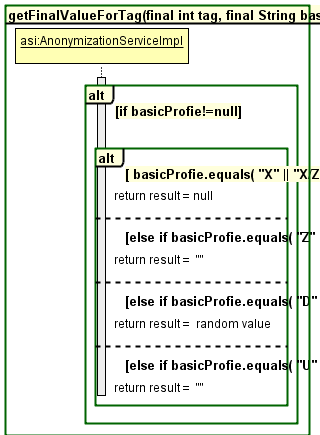


Figure 4. Anonymized tag value based on profile

### Email

Send email

Define email content and when it is sent.

### New folders

TODO