WasteIncineratorService

Intro

WasteIncineratorService is the final project assigned by Prof. anatali for the major course of Software Engineering.
You can find the requirements of the application here.

QAK

The majority of the project has been modeled using QAK (Quasi Actor Kotlin), a meta-model created at UNIBO. QAK has its own DSL developed using xText that compiles directly into Kotlin code.
QAK allowed us to design the application with a higher level of abstraction, introducing the following main concepts:

- Actor: active entity modelled as finite state machines capable of sending and receiving messages.
- Context: an environment that contains some actors and abilitates them to communicate with other actors both in the same or in another context
- Interactions: abstractions of the main communications strategies (requests, dispatches, events).

We chose to use QAK because it helps bridge the abstraction gap, allowing us to maintain a higher level of technology independence during the initial phases of development.
You can find a detailed description of QAK here.

Development process

We adopted a Scrub inspired development process, where the main assignement was divided in a series of sub-problems each faced during in a Sprint.
At the end of each Sprint we produced an executable version of the system covering some of the requirements.

Sprints

Sprint Name	Description	QAK	UserDoc
WIS_Sprint0	requirements analysis	sprint0.qak	sprint0.md sprint0.pdf sprint0.html

Usage

Credits