Homework 1

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Profiler Agent

The Profiler agent will start off by creating a user with random interests and show a simple GUI for selecting a guide for the guided tours that are available. It will also subscribe for changes in the DF when new guide services are available.

When a tour is selected the Profiler agent will create a message, pass it to a `SimpleAchieveREInitiator` to initiate the communication with the Tour Guide agent and request a tour. The user profile is sent with this request so the Tour Guide knows what the users interests are.

When a response (with a list containing ids of the artifacts in the tour) is received it will create another message and pass this list with another `SimpleAchieveREInitiator` to the Curator agent to request detailed information about the artifacts in the list.

When the response containing the detailed information is received from the Curator agent, the Profiler agent will show it in a simple GUI.

Tour Guide Agent

The Tour Guide agent will first register its guide services and then use a `MsgReceiver` behaviour to receive tour requests. When such a message is received it will initiate communication with the Curator agent with the help of another `SimpleAchieveREInitiator`, to get a tour based on the interests of the user who requested it. The Profiler agent provided the user profile with the request and the Tour Guide agent will forward it to the Curator agent.

When the response is received, containing a list of artifact ids of the tour, the message is forwarded to the Profiler agent who requested the tour.

Curator Agent

The Curator agent will first create the Art Collection (Museum), a list of random artifacts that it will use to build virtual tours for the Tour Guide agent and give detailed information to the Profiler agent. Then it will add two `SimpleAchieveREResponders` to respond to messages sent from the Tour Guide agent and the Profiler agent. It will also register its curator services so the Tour Guide agent can find them. Both the Profiler and Tour Guide agent uses DF to find the curator.

The Tour Guide agent will request a list of artifact ids based on a user profile. Therefore a method for finding artifacts with specific genres and eras were created and used when a tour is requested.

The Profiler agent will request detailed information about artifacts. Since the Art Collection is consisting of a HashMap, searching is easy.

Misc

Since agents may receive different requests I needed some way to distinguish requests of different kind from each other. (ex. The Curator agent will both receive requests from the Tour Guide for building a virtual tour and from the Profiler agent for detailed artifact information.) I set different Ontologies to the different kinds of messages and used `MessageTemplate.MatchOntology(String)` to receive the correct messages in the correct receiver. Maybe there is a better way?