Semantic Web - Project description

The objective of the project in the semantic web course is to get more familiar with the practice of building a semantic web application from an end-to-end perspective. The goal is therefore to build such an application (a simple version of it), including building the RDF graphs that it uses, associate those graphs with a proper vocabulary (or even better, an ontology) and write the queries that will be used within the application. If time allows, adding a GUI on top would be a nice bonus.

The project should be carried out by groups of 3 or 4 students.

1 Description of the application to build

The application to build is one that recommends new video games to play to users, based on what they have played and enjoyed in the past. The idea is therefore to collect in one or several RDF graphs information about existing video games and information about the games that users have played before (and how much they liked them), so that those graphs can be queried to find games that are similar to the most played/liked ones of each users. The steps to achieve this therefore include (no necessarily in that order, although that order makes sense).

1. define a vocabulary (optionally, an ontology) to represent games and users.
2. find sources of information about existing video games, either already in RDF (e.g DBpedia) or to be transformed, and adapt them to your vocabulary, so to have a graph of video games.
3. add to the graph (preferably in a separate named-graph) information about some users, including at least which games they played, and how much they liked them.
4. Write the SPARQL queries to build the profile of a user (what kinds of games and what characteristics of games that user tends to like) and queries to retrieve games that are as close as possible to a given profile. Those queries should assume inference is enabled.
5. Test those queries on the users of your graph using SPARQL on a store with inference enabled.

Optionally, if you have time and want to, a nice bonus would be to create an interface for users to complete their profiles (add new games they played and how much they liked it) and to obtain recommendations and browse them (see the list of recommended games and inspect each of them).

2 Forming groups

You have until the lecture on the **1st of April** to form groups of 3 or 4 students. In order to register a group, write down the name of the group and the name of each student participating in the spreadsheet at (also linked on Arche)

`https://docs.google.com/spreadsheets/d/1bF1om3MgHYLxDyzOexD6S6-0LaDIJPhYXbAlWoBuQCs/edit#gid=0`

3 What to submit, when and where

You will have until the **27th of May** (day of the last lecture) to submit your project on Arche. The submission should include:

1. Your graphes in turtle format
2. a short report (5 pages max) describing how you built the vocabulary/ontology, the graphes and the queries your application uses.
3. If you have created an interface for your application, you can also include its code and add 1 or 2 pages in the report to describe it.