Documentation for the translation module

**Overview**

The translation module will translate a word at choice from a given sentence.

**Objectives**

* Short response time (minimise the number of queries to online services)
* Provide an accurate translation

**Usage**

The module provides an interface (API) to interact with. It mainly consists in a method translate with two parameters: a word and a sentence.

**Reference**

The goal is to find a one-to-one corespondence between the english words and the romanian words. To do so, first, the sentence is translated after which all the words within are translated. Then, the corespondence is built in a greedy way (terms with the same meaning are associated and the remaining words are grouped with other terms).

We will use two translation APIs. Google translate will be used for translating sentences (it has more meaningful translations). Because google translate does not offer a free API, we will also be using bing translator to translate words or groups of words. Google translate’s REST API returns a JSON containing the translation. Bing translator’s API is accessible only from program using .net technologies so we will use a java wrapper or create a dll to overcome this.

In the end, if the resulting equivalent wordnet is not satisfying, we can use Dexonline to add synonims to synsets.

We will use xml and json parsers to easily process downloaded pages.

**Limitations**

* Online servives usage limit (translation API and other dictionaries) will prevent the application from running

**Instruments used**

* Java IDE
* Translation API (google translate/bing translator)
* Romanian dictionary (dexonline.ro)

**Team composition**

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