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Alfonso J. Cornejo Castillo

In regard to the objectives defined to be worked on during the weeks contained between July 3 and July 21, the following progress and knowledge have been achieved for each objective.

1. Understand MI-writer for moodle and customize it for Spanish language interactions.

Moodle's i18n support was used to locally install the latest version of Moodle in spanish to which was added the mi-writer plugin. The MI-writer sensor's code was modified to support writing in spanish using a spanish dictionary for spell error checking.

The plugin successfully captured interactions in the Textareas used for filling assignment questions, identifying the incorrectly spelled words in spanish and sending this data to the Moodle MySQL database.

In the following image can be seen the capture of the text typed in for a test assignment and the calculations done by the plugin as the text was being written.

		text	word	sentence	spellerrorwords	spellerro
102	102	This	1	1	This	0
103	103	This sentence i	3	1	This,sentence	0,1
104	104	This sentence is	3	1	This,sentence,is	0,1,2
105	105	This sentence is in	4	1	This,sentence,is	0,1,2
106	106	This sentence is in english.	5	1	This,sentence,is,english	0,1,2,4
107	107	This sentence is in english.	5	1	This,sentence,is,english	0,1,2,4
108	108	This sentence is in english. Esta f	7	2	This,sentence,is,english	0,1,2,4
109	109	This sentence is in english. Esta frase	7	2	This,sentence,is,english	0,1,2,4
110	110	This sentence is in english. Esta frase está	8	2	This,sentence,is,english	0,1,2,4
111	111	This sentence is in english. Esta frase está en e	10	2	This,sentence,is,english	0,1,2,4
112	112	This sentence is in english. Esta frase está en español.	10	2	This,sentence,is,english	0,1,2,4

The modification to the MI-writer plugin done and the version of moodle used can be found in the git repository:

https://github.com/alfunkso/moodle

2. Understand EIDEE and customize it for Python.

A local installation of the Hackystat services were installed to support the SCALE architecture in which EIDEE runs. The Hackystat's Eclipse sensor extension (https://code.google.com/p/hackystat-sensor-eclipse/) was installed in an instance of the Eclipse Indigo IDE and it was setup to send the sensored data to the instance of the Hackystat sensorbase running locally. Additionally, the PyDev extension for Eclipse was installed to add support for the python programming language.

The sensor successfully recorded the changes to the Python code done by the user for and were stored on the Hackystat database. The following image is a screenshot of the data shown by the Hackystat Project Browser for code written in Python.

Timestamp	Runtime	SDT	Owner	Tool	Resource
2014-07-23T17:55:49.666-04:00	2014-07-23T17:55:49.666-04:00	DevEvent	alfunkso@hotmail.com	Eclipse	file:/C:/Users/AlfonsoJ/Dropbox/Athabasca%20University/eclipse/workspace/PythonAndHackystats/hailstone.py
	Properties: Type = Edit,Subtype = Open,Unit-Name = hailstone.py,Unit-Type = file,				
2014-07-23T17:56:19.642-04:00	2014-07-23T17:56:19.642-04:00	DevEvent	alfunkso@hotmail.com	Eclipse	file:/C:/Users/AlfonsoJ/Dropbox/Athabasca%20University/eclipse/workspace/PythonAndHackystats/hailstone.py
	Properties: Type = Edit,Current-Size = 184,Subtype = StateChange,				
2014-07-23T18:07:41.398-04:00	2014-07-23T18:07:41.398-04:00	DevEvent	alfunkso@hotmail.com	Eclipse	file:/C:/Users/AlfonsoJ/Dropbox/Athabasca%20University/eclipse/workspace/PythonAndHackystats/hailstone.py
	Properties: Type = Edit,Subtype = Close,Unit-Name = hailstone.py,Unit-Type = file,				
2014-07-23T18:09:02.341-04:00	2014-07-23T18:09:02.341-04:00	DevEvent	alfunkso@hotmail.com	Eclipse	file:/C:/Users/AlfonsoJ/Dropbox/Athabasca%20University/eclipse/workspace/PythonAndHackystats/hailstone.py
	Properties: Type = Edit,Subtype = Open,Unit-Name = hailstone.py,Unit-Type = file,				
2014-07-23T18:09:32.338-04:00	2014-07-23T18:09:32.338-04:00	DevEvent	alfunkso@hotmail.com	Eclipse	file:/C:/Users/AlfonsoJ/Dropbox/Athabasca%20University/eclipse/workspace/PythonAndHackystats/hailstone.py
	Properties: Type = Edit,Current-Size = 229,Subtype = StateChange,				

3. Understand MI-Dash and customize it for Python.

Although the objective of customizing MI-Dash for Python support wasn't achieved, the understanding of the MI-Dash interface was acquired successfully.

A sample SCALE package was provided by David Boulanger for understanding EIDEE and MI-Dash in which some sample Java assignments are presented to see the functionality and to get an idea of the SCALE architecture.

Upon completion of the sample assignments, all of the MI-Dash visualization tools were explored and full understanding of their purpose and of the data that they present was achieved.

4. Develop hackystat interfaces for SketchPad collaboration application (developed in Chile).

Upon the understanding of the SCALE architecture acquired during the weeks worked on these tasks, it was decided that to implement a Learning Analytics environment for the Sketchpad collaboration application, it is going to use the SCALE architecture to sensor, analyze and display the interactions done by its users.

For this purpose the current Sketchpad working architecture will be redesigned to include a Hackystat Sensor module which will record the interactions of the students and send them to a Hackystat sensorbase for posterior analysis done in the same way the EIDEE and MI-Dash system works.

Said design and implementation will be developed during the following spring semester 2014 in Chile to begin on August this year.

5. Develop an experimental design to evaluate EIDEE/MI-Dash in Chile.

The proposed experimental design to evaluate EIDEE and MI-Dash with Python support in Chile consists of a simple experiment in which one section of the first year students that need to take the course “CC1001 Computación 1” (Computation 1) will be randomly selected to be required to use EIDEE to work on their assignments so that it will record their progress through the development of their work and through the whole semester.

Said students shall be granted access to MI-Dash to see their own stats and compare themselves to the section’s students average.

Upon completion of the school’s semester, the section’s students scores in exams will be recorded and compared to the other section’s students to analyze the impact and the effects of using EIDEE in the learning environment and to validate that its use is helpful to the students.