

PeTE: A SPEECHWEB APPLICATION THE PERIODIC TABLE

Application Category

Developer Information

Name	David Dufour
Email or webpage (optional)	dufour11@uwindsor.ca
Education level when created the application	1 st year undergraduate student
Institution	University Of Windsor

Application Information

Application Name	PeTE
Date created	June 2008
Link to the application	http://cs.uwindsor.ca/~dufour11/PeTE/PeTE.xml
Link to the code (optional)	http://cs.uwindsor.ca/~dufour11/PeTE/PeTE.m
Link to the grammar (optional)	http://cs.uwindsor.ca/~dufour11/PeTE/PeTE.jsgf
What is the application about?	The Periodic Table of Elements (PeTE) application can answer simple questions about the periodic table and its elements. Information on the groups and the elements themselves are available. Specifically the mass, the number of electrons, mass and bowling points, chemical symbol and more.
Why was the application created?	PeTE is an application based off the Geoman application created so that I could become familiar with the SpeechWeb architecture. It is both a Q/A type of SpeechWeb application that gets the information from a local database. It also calculates some of the data to save space.
How was the application created?	PeTE was created by using the manual on how to create SpeechWeb applications available on the SpeechWeb developers' webpage.
What is the programming language used?	Miranda, a functional programming language
How does the application work?	PeTE accepts an input from the user; the input is in a question form. The application parses the question and extracts the keywords such as the name of the element and some required piece of information and then searches for the info in a database containing the information needed.
What is good about the application?	PeTE would be useful to high school students taking a chemistry class, providing them with practical information on the periodic table. From a developer's viewpoint, this application is useful as a template for a Q/A session, using keywords from the question to fetch the answer from a database. There is also a condensed way of representing electron configurations in a functional programming language.
Problems faced while creating the application and solutions	No serious problems were encountered as this application was structured similar to the Geoman application.
How can other developers create a similar application?	Developers can create a similar application by looking up the code and learning the techniques used to parse the questions and returning the appropriate answers. Developers can also use the manuals on the SpeechWeb developers' webpage.
Other comments	The developers' webpage is at: http://cs.uwindsor.ca/~speechweb/developers.html Suggestions and questions can be forwarded to my email