# EUCLID: AN APPLICATION THAT ASKS MATH QUESTIONS

| *Application Category* | |
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## *Developer Information*

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| **Name** | **Ali Karaki** |
| **Email or webpage (optional)** | karabi@uwindsor.ca |
| **Education level when created the application** | 1st year undergraduate student |
| **Institution** | University Of Windsor |

## *Application Information*

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| **Application Name** | **Euclid** |
| **Date created** | May 2008 |
| **Link to the application (Indirect link)** | http://cs.uwindsor.ca/~karabi/euclid/eudid.html |
| **Link to the code (optional)** | http://cs.uwindsor.ca/~karabi/euclid/eudid.c |
| **Link to the grammar (optional)** | http://cs.uwindsor.ca/~karabi/euclid/eudid.jsgf |
| **What is the application about?** | Euclid can ask math questions of different levels of difficulty, there are three levels increasing in difficulty.<br>Users can move between levels depending on the score. |
| **Why was the application created?** | Euclid was created to demonstrate the type of SpeechWeb applications that can ask questions to the user and verify user's answers. It is also a session type application. |
| **How was the application created?** | Euclid was created by using the manual on how to create Session type SpeechWeb applications available on the SpeechWeb developers' webpage. |
| **What is the programming language used?** | C, A procedural programming language |
| **How does the application work?** | Euclid works in cooperation with the SMS system which is a session handling system. It starts by asking the user for his/her age to select a level and then asks ten questions verifying the user's answers. Here is the scenario: the application generates a random question, it computes the answer and stores it in the user's file, asks the question to the user, gets the answer and compares it with the stored correct answer. |
| **What is good about the application?** | Euclid can help people improve their mathematics skills, it can be used as a learning tool for students. It also demonstrates how interactive a SpeechWeb application can be. |
| **Problems faced while creating the application and solutions** | One problem was how to indentify the inputs and outputs, which input/output is to which user. A basic solution was to identify users by IP address. However, this solution didn't work as required since computers in the same domain have the same external IP address. A more sophisticated solution was implemented. That is the SMS system. |
| **How can other developers create a similar application?** | Developers can create a similar application by making use of the session handling package available on the SpeechWeb website. Developers can also use the manuals on the SpeechWeb developers' webpage. |
| **Other comments** | The developers' webpage is at:<br>http://cs.uwindsor.ca/~speechweb/developers.html |