

John Healy
12.18.2003
POS 355
Timothy H. Long

Programming languages used at Little John's Software

Here at my company, Little John's Software, we use several different languages. Each language meets a specific need we have and is chosen based on those needs. One of the current software projects currently under development is Guardian we are use JAVA, and HTML. A second software project under development is a program to solve the Beal Conjecture and for this project we are using C++.

The main program being developed by my team of programmers is Guardian. Guardian is parental control software. With this software my company can guarantee what a child can see on the Internet and can not see on the Internet. One of the special needs for the program is being able to run on any operating system a parent my have on the computer and because of this requirement I have chosen JAVA to be the language used to write the code for the Guardian program. The other language in uses is HTML. The HTML code along with ASP for JAVA will be used to create the website on the Internet for the Guardian program also because of the special needs of the program we will be using JAVA ASP on the website. Only a few pages of the website will be using JAVA ASP the reminder of the website will be using HTML code. All of the programming for the current project Guardian is being developed in house for security reasons. This program takes a complex problem and uses a simple solution to accomplish what other programs are not able to do. What I am talking about is the program Guardian can guarantee what a child can and can't see on the Internet. No other software on the market or in development can clam boast this fact but my company can.

The Beal Conjecture problem is as follows. $A^X + B^Y = C^Z$, where A, B, C, X, Y, and Z are positive integers and X, Y and Z are all greater than 2, then A, B and C must have a common factor. The software project is trying to disprove the formula. If my team can disprove the formula there is a cash prize currently worth \$100,000 USD plus you also get bragging rights. For this project called Beal Conjecture my team and I have tried several different languages. After the team and I have looked and studied several different languages, C, C++, JAVA, Visual Basic, and FORTRAN we choose to write the code in C++ because this program gave us the most control and the ability to create our own class, an exceptionally large integer, and has the best control for the created class. For the most part the program is a simple program to write it is just 3 for loops inside 3 other for loop with a few if statements. The difficult part of the program is creating an extremely larger integer number and all corresponding functions for the extremely larger integer. The functions we need for this project are equal, and add, because multiplying is just adding over and over again the multiply function will be a simple one. My team has created about 5 different classes of extremely large integers and each time we had to start over. One time the number was not large enough and another time we were just way out in left field and completely lost. The current line of thought is to use binary numbers and store the number as a string but this line of thought brings on a very large pounding head when we think about trying to add 2 binary numbers that are stored in a string and putting out a third string, being the answer of adding the first two strings together. For small numbers this is no problem but with extremely large numbers they do not convert nicely.

As one can see my company has access to several different programming languages both in knowledge and in software but we only use a language when the language fits the specific needs of a project we are working on.