CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)

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Project Number

S1413

Project Title

Combining Programming Languages to Improve Performance

Abstract

Objectives/Goals

The goal is to generally improve the performance of any device through combining multiple programming languages.

Methods/Materials

The important Materials are:
Computer
Eclipse Java Software
Eclipse C++ Software
The Procedure Is:
1.Launch the Eclipse program for the Java environment
2.Enter in the code for multiplying matrices and a way to time it
3.The result is given in milliseconds, record it.
4.Repeat step 2-3 20 times.
5.Launch the Eclipse program for the C++ environment.
6.Enter in the code for multiplying matrices and a way to time it
7.The result is given in milliseconds, record it.
8.Repeat step 6-7 20 times.
9.Launch the Eclipse program for the Java environment once again
10.Enter in the code multiplying matrices utilizing the JNI and a way to time it
11.The result is given in milliseconds, record it.
12.Repeat step 10-11 20 times.
13.Analyse Collected Data.

Results

The results were that through the insertion of JNI, the performance indeed has been increased by 85%.

Conclusions/Discussion

The results are all pointing towards the fact that indeed JNI helps improve the performance of coding with the computers. Also, the times that this took seems to be fluctuate a bit between trials but still maintains a similar zone of time with repeated trials. By averaging the 20 trials, I believe that I got rid of the fluctuation as much as possible. The efficacy of the JNI has now been proven to be useful even in computers with this experiment. Also, one of the major parts being the fact that the performance increased by 85 percent is quite amazing with the simplest insertion of the JNI protocol.

Summary Statement

Combining Java and C++ o see if the performance improves.

Help Received

None-except the internet.