



CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

Name(s) Kun Woo Kevin Kim	Project Number S1413
Project Title Combining Programming Languages to Improve Performance	
Objectives/Goals The goal is to generally improve the performance of any device through combining multiple programming languages.	
Abstract	
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.	