CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY

Name(s)	Project Number
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	34496

Project Title

Dart vs. JavaScript: A Benchmarked Comparison of Two Client-Side Languages

Abstract

Objectives/Goals

The project compares Dart and JavaScript, two programming languages, using the Kraken Benchmark.

Methods/Materials

Dart and JavaScript are both client-side languages; they run on the user's computer when a website is loaded. They allow for interactivity within websites. Dart is Google's replacement for JavaScript, as JavaScript contains numerous problems. The Kraken Benchmark is a series of tests, approximately 100,000 lines of code long, which is typically used to measure the speed of JavaScript in various browsers. The investigator translated the Kraken Benchmark into Dart, then ran the benchmark in both Dart and JavaScript 25 times. The speeds were then compared.

Results

While it was hypothesized that Dart would be much faster than JavaScript, Dart was in fact much slower, taking almost four times as long to run the tests.

Conclusions/Discussion

Dart is not yet ready for widespread use. This has real-world implications, as everybody is looking for ways to maximize browser speeds, especially on mobile devices.

Summary Statement

The project, by comparing the speeds of Dart and JavaScript using the Kraken Benchmark, which the experimenter translated into Dart, demonstrated that Dart is not yet ready for widespread use.

Help Received

Father helped edit writeup

Ap2/14