Benchmarks

Miscellaneous Comments

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"In computing, a **benchmark** is the act of running a computer program, a set of programs, or other operations, in order to assess the relative performance of an object, normally by running a number of standard tests and trials against it."

–Wikipedia (https://en.wikipedia.org/wiki/Benchmark_(computing))

Main Approach

- Your report should contain enough information for somebody to redo your experiment.

Format of a Report

- Put **your name** at the top of the report

- Explain what the benchmark is about

- Explain what is being measured

- Indicate what type of hardware the measurements are made on.

- List the programs used (or where they can be found)

- Report the measurements

- Analyze the results

Format of a Report

- Put your name at the top of the report

- Explain what the **benchmark** is about

  Measuring speed of several languages, arithmetic

- Explain what is being measured

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Format of a Report

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- Explain what the benchmark is about

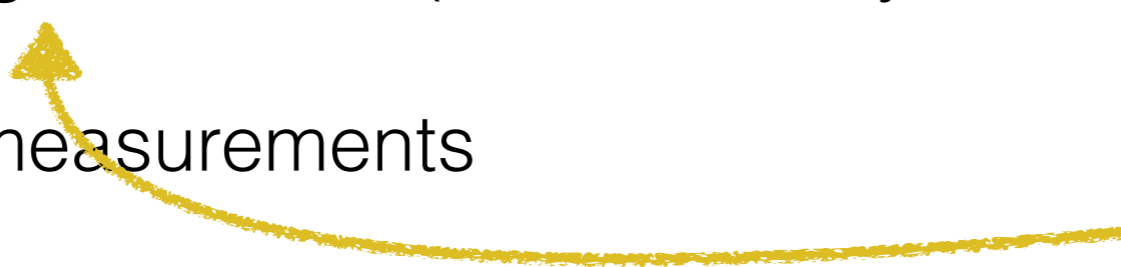- Explain what is being **measured**

Execution times for N loops. Average of R runs.

- Indicate what type of hardware the measurements are made on.

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Format of a Report

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- Explain what is being **measured**

- Indicate what type of hardware the measurements are made on.

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Show that *N* is appropriately large!

Execution times for N loops. Average of R runs.

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Linux, Mac, PC.
x GHz, m GB

- Indicate what type of **hardware** the measurements are made on.

- List the programs used (or where they can be found)

- Report the measurements

- Analyze the results

Format of a Report

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- Explain what the benchmark is about

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- Indicate what type of hardware the measurements are made on.

- **List** the programs used (or where they can be found)

- Report the measurements

- Analyze the results

List programs, or give URLs

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- Report the **measurements**

- Analyze the results

*Table, include units.
Rule of thumb: Make
sure time is over
1 second*

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- Report the measurements

- **Analyze** the results

Time to shine! Compare, report, conjecture.

Concept of I/O-Bound vs. CPU-Bound

- I/O-bound benchmarks

- CPU-bound benchmarks