Documentation Improvements

Chapel Team, Cray Inc.
Chapel version 1.12
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Outline

- Online Documentation Improvements
- Language Specification Improvements
Online Documentation Improvements
Online Docs: Background

- v1.11 added some online documentation via ‘chpldoc’
  - Most standard modules were documented online
  - We wanted to make a lot more documentation available online

- The repository contains many README files
  - These are not very readable in a browser
  - It can be hard to find what you want
Online Docs : As of 1.11

chpldoc documentation

Contents:

- Module: AdvancedIters
- Module: Assert
- Module: BitOps
- Module: Buffers
- Module: CommDiagnostics
- Module: Curl
- Module: Error
- Module: FFTW
- Module: FFTW_MT
- Module: FileSystem
- Module: GMP
- Module: HDFS
- Module: HDFSScatter
- Module: Help
- Module: IO
- Module: List
- Module: Math
- Module: Memory
- Module: Norm
- Module: Path
- Module: Random
- Module: RecordParser
- Module: Regexp
- Module: Search
Online Docs: This Effort

- Converted the READMEs to reStructuredText
  - Renders nicely on the web
    - GitHub
    - Sphinx-generated html
  - Still readable as plain text
  - Supports links between related documents

- chpldocs and READMEs are now in one location online
  - [http://chapel.cray.com/docs/1.12/](http://chapel.cray.com/docs/1.12/) -- docs for the 1.12 release
  - [http://chapel.cray.com/docs/latest/](http://chapel.cray.com/docs/latest/) -- links to the latest release docs
  - [http://chapel.cray.com/docs/master/](http://chapel.cray.com/docs/master/) -- docs for the master branch

- Added chpldoc-based documentation for:
  - Built-in types and functions
  - Standard domain maps (layouts and distributions)

- Refreshed the “Quick Start” instructions
Online Docs : Impact

- Over 100 pages of online documentation!
- Documentation front page:
Online Docs : Impact

● Quick Start Page:

The Chapel Language

Chapel is an emerging programming language designed for productive parallel computing at scale. Chapel's design and implementation have been undertaken with portability in mind, permitting Chapel to run on multicore desktops and laptops, commodity clusters, and the cloud, in addition to the high-end supercomputers for which it was designed. Chapel's design and development are being led by Cray Inc. in collaboration with academia, computing centers, and industry. See chapel.cray.com for more information.

This is the 1.12.0 release of the Chapel compiler, intended to give potential users a look at what we're doing and the opportunity to provide us with feedback. See the LICENSE file for the release's licensing terms.

Quick Start Instructions

The following instructions are designed to get you up and running with Chapel with a minimum of fuss. Note that building and using Chapel in this mode disables enhanced runtime options and optional language capabilities in the interest of a simple and clean build.

0. See prereqs.rst for more information about packages you might need to have installed for Chapel to work.
Online Docs : Next Steps

- Improve the process for building online documentation
  - Better integration with chpIdoc
- Write a User’s Guide and add to the docs/ webpages
- Add a drop-down menu to switch between doc versions
- Continue to move remaining documentation to the web
- Consider moving examples/[primers/] directory to the web
Language Specification Improvements
Language Specification Improvements

- Retired chapters that are now documented online
  - i.e., standard modules and standard domain maps
- Rewrote the memory consistency model chapter
- Documented the bidirectional I/O operator: <~>
- Improved the page numbering and format
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