

# How to become a D contributor?

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[dlang.rocks/contribute](https://dlang.rocks/contribute) (slides)



@swilzbach



@wilzbach

# State of D 2018

<https://github.com/wilzbach/state-of-d-2018>

# The problem

How would you rate your experience learning D?

503 out of 540 people answered this question



**3.85**

Average rating

How would you rate the quality of Phobos's (Standard Library) documentation?

492 out of 540 people answered this question



**3.64**

Average rating

# The problem

How would you rate the quality of D's specification?

271 out of 540 people answered this question



**3.76**  
Average rating

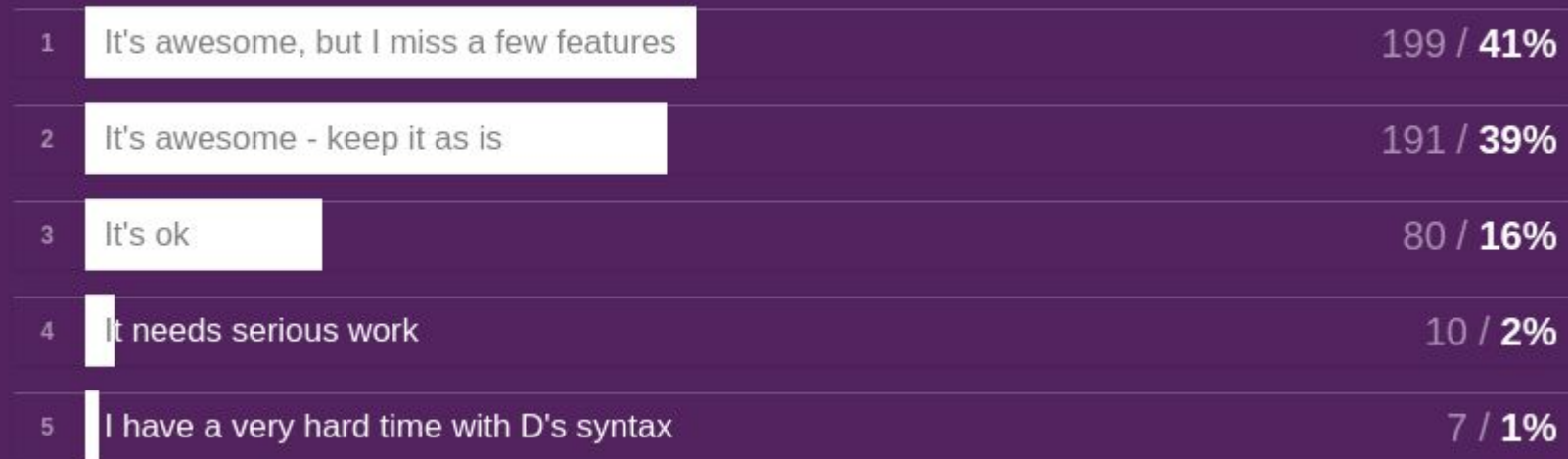
► Show detail



# The problem

How happy are you with the language syntax?

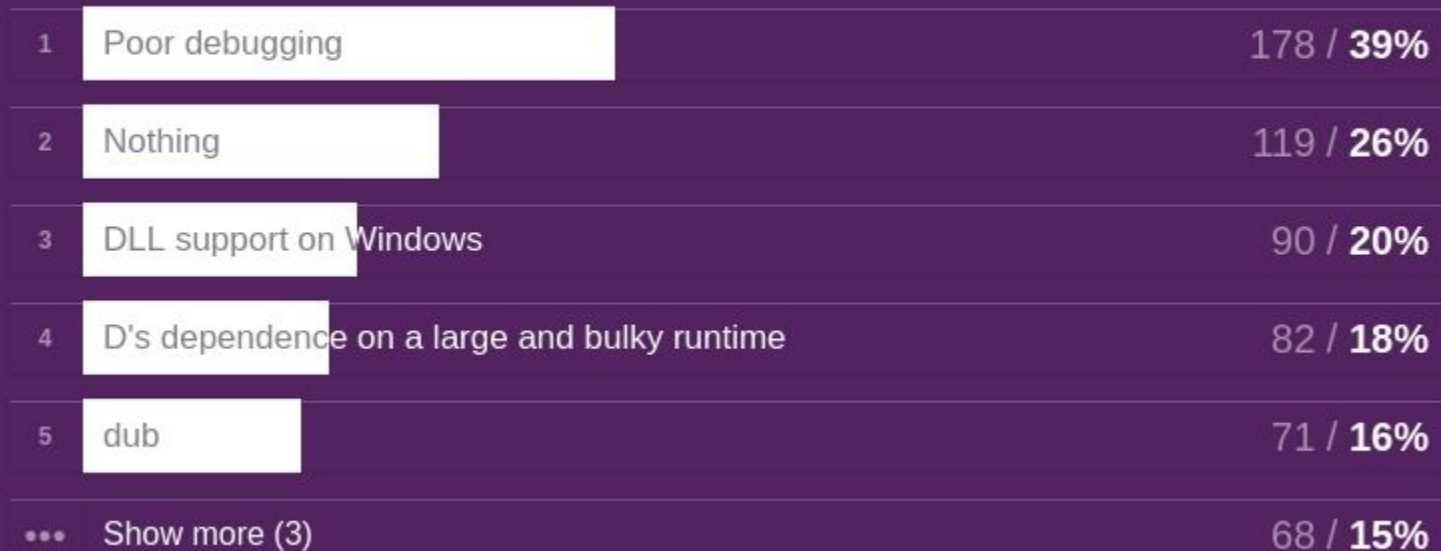
487 out of 540 people answered this question



# The problem

Are any of these tooling issues discouraging you from actively using D?

457 out of 540 people answered this question

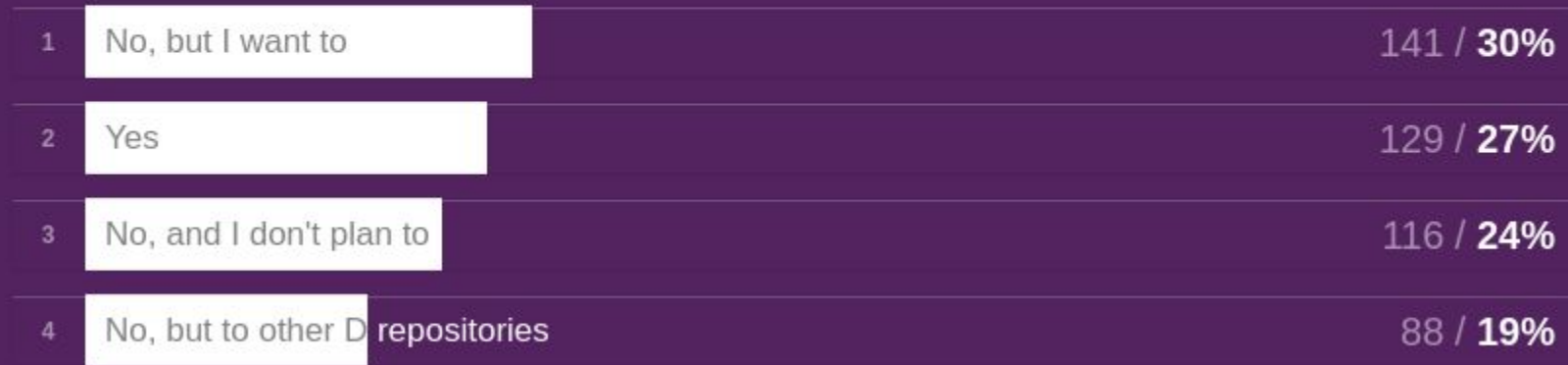




# Can we fix this?

Have you contributed to dlang on GitHub?

474 out of 540 people answered this question





# The D contribution experience

How would you rate your experience?

129 out of 540 people answered this question



**3.67** Average rating

# Contribution

- Blog post
- Tutorial
- Documentation improvement
- HackerNews / reddit involvement
- Mention D at XYZ
- Answering questions on StackOverflow || NG.learn
- Reporting an issue
- Donation
- etc.



# Bugzilla

How satisfied are you with D's Bugzilla?

218 out of 540 people answered this question



**3.27**  
Average rating

# Bugzilla

- Triage
  - INVALID?
  - WONTFIX?
  - WORKSFORME?
  - DUPLICATE?
  - REGRESSION?
- Tag (e.g bootcamp)



# Bugzilla Bootcamp

Keywords: bootcamp, preapproved    Resolution: ---    Component: phobos    Product: D

99 issues found.

| <a href="#">ID</a>    | <a href="#">Product</a> | <a href="#">Comp</a> | <a href="#">Assignee</a> ▲     | <a href="#">Status</a> | <a href="#">Resolution</a> | <a href="#">Summary</a>  |
|-----------------------|-------------------------|----------------------|--------------------------------|------------------------|----------------------------|--|
| <a href="#">18290</a> | D                       | phobos               | nobody@puremagic.com           | NEW                    | ---                        | <a href="#">std.conv.parse throws ConvOverflowException for negative values in hex</a>   |
| <a href="#">4391</a>  | D                       | phobos               | nobody@puremagic.com           | NEW                    | ---                        | <a href="#">std.functional.curry is not a real curry</a>                                 |
| <a href="#">19727</a> | D                       | phobos               | nobody@puremagic.com           | NEW                    | ---                        | <a href="#">std.algorithm.endsWith fails to compile while startsWith succeeds</a>        |
| <a href="#">19525</a> | D                       | phobos               | nobody@puremagic.com           | NEW                    | ---                        | <a href="#">Duration is not usable with zero-arg std.algorithm.sum</a>                   |
| <a href="#">18333</a> | D                       | phobos               | nobody@puremagic.com           | NEW                    | ---                        | <a href="#">binaryHeap documentation inadequately describes slice store invalidation</a> |
| <a href="#">18446</a> | D                       | phobos               | nobody@puremagic.com           | NEW                    | ---                        | <a href="#">Wrong curl onProgress examples</a>   |
| <a href="#">13825</a> | D                       | phobos               | dechcaudron+issues.dlang@pm.me | ASSI                   | ---                        | <a href="#">relativePath not handling "." and ".." correctly</a>                         |

[https://issues.dlang.org/buglist.cgi?component=phobos&keywords=bootcamp%2C%20preapproved&keywords\\_type=anywords&list\\_id=225005&product=D&query\\_format=advanced&resolution=---](https://issues.dlang.org/buglist.cgi?component=phobos&keywords=bootcamp%2C%20preapproved&keywords_type=anywords&list_id=225005&product=D&query_format=advanced&resolution=---)

# Bugzilla

- Triage
  - INVALID?
  - WONTFIX?
  - WORKSFORME?
  - DUPLICATE?
  - REGRESSION?
- Tag (e.g bootcamp)
- Minimize



Workshop: CyberShadow vs Bugzilla S01

# Bugzilla Anti-Patterns

[shove](#) 2018-06-11 16:07:50 UTC

[Description](#) [\[tag\]](#) [\[reply\]](#) [\[-\]](#)

Excuse me, what's the reason for this phenomenon?

I have a project that can be compiled in the debug mode with the latest DMD 2.080-1, but I report errors in release mode.

```
// release:
```

```
$ dub -b release
```

```
...
```

```
Linking...
```

```
Undefined symbols for architecture x86_64:
```

```
"__D3std4conv__T7toCharsVii10TaVEQBd5ascii10LetterCasei1TmZQBrFNbNiNfmZSQCsqCr__TQCpVii10TaVQCki1Tm  
referenced from:
```

[https://issues.dlang.org/show\\_bug.cgi?id=18971](https://issues.dlang.org/show_bug.cgi?id=18971)

# Bugzilla - minimization with DustMite

- Bundled with the official releases
- Superb at reducing your code example
- Error message

```
dustmite . "dmd -c foo.d 2>&1 | grep -qF "<error msg>"
```

- Specific Segfault in DMD

```
dustmite . "gdb -batch -ex run -ex bt -args dmd -c -o- structlit.d |  
grep _D3dmd10expression16StructLiteralExp6"
```

Full doc: <https://github.com/CyberShadow/DustMite/wiki>



# Fork & clone

- 1) Find issue/bug (-> [issues.dlang.org](https://issues.dlang.org))
- 2) Fork repositories on GitHub (-> [github.com/dlang](https://github.com/dlang))
- 3) Clone locally

```
git clone git@github.com:<user>/dmd
```

```
git clone git@github.com:<user>/druntime
```

```
git clone git@github.com:<user>/phobos
```

## Fixing your first issue: part II

4) Work on issue and (re)-build:

```
DMD: ./src/build.d
```

```
Druntime/Phobos: make -f {win32,win64,posix}.mak -j8
```

5) Run test(s)

```
DMD: ./test/run.d compilable
```

```
DRuntime/Phobos: dmd(dev) -unittest -main -run std/<mod.d>
```

6) Submit PR

# Hall of Frame on dlang.org

## Contributors (621)

A list of all the awesome people that made D possible.

The list of contributors is sorted alphabetically and automatically generated from commits to the [dmd](#), [druntime](#), [phobos](#), [dlang.org](#), [installer](#), [tools](#) repositories. The list is updated daily.

|               |                        |                          |                   |
|---------------|------------------------|--------------------------|-------------------|
| 0xEAB         | Dmitry                 | justanotheranonymoususer | qchikara          |
| 1100110       | Dmitry Atamanov        | Justin C Calvarese       | Quirin F. Schroll |
| Aaron Zeng    | Dmitry Ds              | Justin Holewinski        | Radosław Rusiniak |
| abaga129      | Dmitry Olshansky       | Justin Whear             | Radu Racariu      |
| aceawan       | Doado                  | k-hara                   | Rainer Schuetze   |
| Adam D. Ruppe | Domingo Alvarez Duarte | Kai Nacke                | ralphandetzky     |

<https://dlang.org/foundation/contributors.html>

# The wider D core ecosystem

- [dlang/tools](#): bundled tools (e.g. `rdmd`)
- [dlang/dlang.org](#): [dlang.org](#) website
- [dlang/dub](#): package manager
- [dlang/dub-registry](#): package registry ([code.dlang.org](#))
- [dlang/dub-docs](#): dub documentation ([dub.pm](#))
- [dlang/dconf.org](#): [dconf.org](#) website
- [dlang/ci](#): CI scripts + project tester ([buildkite.com/dlang](#))
- [dlang/dlang-bot](#): D bot (e.g. issue references, auto-merge)
- [dlang/installer](#): release scripts + `install.sh`

# Continuous integrations (CIs)

- Auto-tester (by Brad Roberts) [auto-tester.puremagic.com](http://auto-tester.puremagic.com)
- DAutoTest (by CyberShadow) [dtest.dlang.io](http://dtest.dlang.io)
- Buildkite: [buildkite.com/dlang](http://buildkite.com/dlang)
- Other
  - Azure Pipelines (more Windows builds)
  - SemaphoreCI (bootstrapping tests)
  - CircleCI (static code analysis + code coverage)
  - Travis (unit tests)
  - Netlify (doc preview)
  - Heroku Pipelines (registry preview)

# Commonly made mistakes

- Targeting the wrong branch (bugs -> stable)
- Trailing whitespace
- Not adhering to the D style ([dlang.org/dstyle](http://dlang.org/dstyle))
- No issue reference nor changelog entry
- Mixing refactoring with bug fixes
- Big pull requests
- Not fully covered code

# git-tools

- pr\_checkout: checkout PRs
- pr\_send : PR submission
- merge\_stable: stable -> master merge script
- pr\_split: split up large PRs automatically
- pr\_push (maintainers only): push to other PRs

<https://github.com/wilzbach/git-tools>

More advanced: <https://github.com/CyberShadow/digger>

## My simple advices for newcomers

- Subscribe via GitHub notifications
- Join Slack or IRC
- Talk. talk. Talk
- Don't give up



Thanks!

More questions?

Slides: [dlang.rocks/contribute](http://dlang.rocks/contribute)

# GSoC 2019

- 6 slots this year
- 12 mentors
- ~ 6.000\$ (three months)
- More updates after DConf
- “Hot” coding period
  - 27 May - 26 August



# GSoC 2019 projects

- Dataframes for D (Prateek Nayak)
- Header generation for C/C++ (Eduard Staniloiu)
- Independency of D from the C Standard Library (Stefanos Baziotis)
- Language Server Protocol in D (Manish Khurana)
- Persistent Data Structures for D (lesderid)
- Replace Runtime Hooks with Templates (Dan Printzell)


## Other \$\$\$ options

- Symmetry Autumn of Code (SAoC)
- Sponsored development (e.g. Mir)
- Open Source programs at work
- D Language Foundation student (Bucharest only)
- D Language community-sponsored projects (e.g. vscode-d)
- D Language Foundation “jobs”
- Bugfix bounty
- Official D blog post



# Backup - GH fun I

**appeasing the brace Nazis**

🔗 master (#4662) 🔗 v2.086.0 ... v2.072.0-b1

 Cauterite committed on Jul 26, 2016 1 parent [052fcc9](#) commit [52110d98db4a3fe4087bc183b5e0b0883f846a28](#)

📄 Showing 1 changed file with 2 additions and 1 deletion.

▼ 3  std/typecons.d 

| File           | Line | Change | Code                      |
|----------------|------|--------|---------------------------|
| std/typecons.d | 291  |        | unittest                  |
|                | 292  |        | {                         |
|                | 293  |        | struct Bar {int val;}     |
|                | 294  | -      | struct Foo {              |
|                | 295  |        | Unique!Bar bar = new Bar; |
|                | 296  |        | }                         |
|                | 297  |        |                           |
|                | 298  |        |                           |
|                | 294  | +      | struct Foo                |
|                | 295  | +      | {                         |

[https://github.com/dlang/phobos/commit/52110d98db4a3fe4087bc183b5e0b0883f](https://github.com/dlang/phobos/commit/52110d98db4a3fe4087bc183b5e0b0883f846a28)

846a28

Backup II

What's the most  
upvoted PR in the D  
ecosystem?

The winner is ...

## switch backend to Boost License #6680

**Merged** dlang-bot merged 1 commit into `dlang:master` from `walterBright:boost-license` on Apr 7, 2017

Conversation 11

Commits 1

Checks 0

Files changed 105



WalterBright commented on Apr 7, 2017

Member



Yes, this is for real!

👍 104

🎉 74

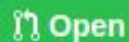
❤️ 37

<https://github.com/dlang/dmd/pull/6680>

What's #2?



# Interpolated Strings #7988



marler8997 wants to merge 1 commit into `dlang:master` from `marler8997:interpolatedStrings`



Conversation 122



Commits 1



Checks 1



Files changed 11



marler8997 commented on Mar 8, 2018 • edited ▾

Contributor



Added interpolated strings. Syntax is to prefix any kind of string literal with the letter `i`, i.e.

```
int a = 100;
writeln(i"a is $(a)");
writeln(i`a + 56 = $(a + 56)`);
writeln(iq{ $(a) * $(a) = $(a*a) });
```

...

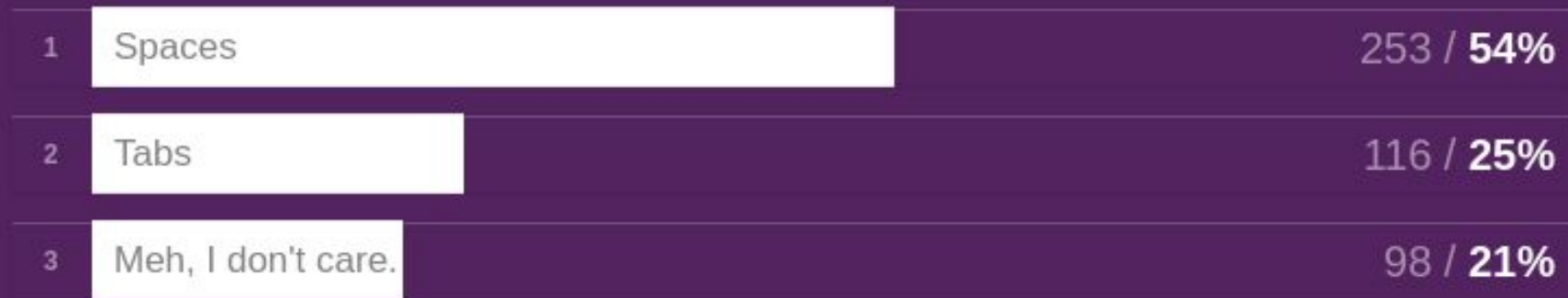


21

# Backup III

## Tabs or spaces?

467 out of 540 people answered this question



# Images

<https://commons.wikimedia.org/wiki/File:Face-surprise.svg>

<https://pixabay.com/illustrations/person-smile-joy-boredom-boring-3160871/>

<https://pixabay.com/illustrations/maintenance-under-construction-2422173/>