

Perl 6 Scripting Language

Computer Tech 2016

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- From the schedule:
 - Part (1) Install Perl 6.
 - Part (2) Tour of IDE.
 - Part (3) Demo some short programs written with Perl 6.

Background

- I'm a recently-retired (2016-01-01) engineer with ManTech International Corporation (<http://mantech.com>)
- I've been using Unix and GNU/Linux and FOSS professionally for over 22 years

The sessions are interrelated:

- Free Software
 - 09:00 AM - Room 127
- Introduction to Linux
 - 10:00 AM - Room 309
- Introduction to Perl 6
 - 11:00 AM - Room 309

These links are on your handout and are related to my sessions:

`<https://computertechnwf.org/2016/sessions/sessions.html>`

`<https://nwflug.org>`

`<http://nicevile.pm.org>`

`<https://github.com/tbrowder>`

What is Perl 6

Perl 6 is what is known as a scripting or interpreted programming language as opposed to a compiled language like C++ or Fortran.

The first stable release of Perl 6 was announced as available on Dec 15, 2015. Its predecessor, Perl (versions 1 through 5), was first released around 1987, and Perl 6 started being developed in 2000 (15 years in the making!).

Although Perl 6 has a lot of compatibility with her big sister, it is largely a new language. Larry Wall, the author of both languages, can explain the evolution of both languages.

Perl 6 is a much larger language than Perl 5, but all its features don't have to be used for beginning to learn the language.

Getting Perl 6

All official things Perl 6 should be found on its website

- [<http://perl6.org>](http://perl6.org)

It is available for Windows but I recommend using on Linux if possible. Currently it is a challenge to install on Windows unless you are used to Windows program development.

Download and installation instructions for Linux and Mac are found here:

- [<http://perl6.org/downloads/>](http://perl6.org/downloads/)

Windows instructions are a bit hard to find but they are here:

- [<https://github.com/tadzik/rakudobrew>](https://github.com/tadzik/rakudobrew)

One of the easiest ways to start is to follow along with this tutorial

- `<http://perl6intro.com/>`

A somewhat more intense route is here:

- `<https://github.com/rakudo/star/raw/master/docs/2015-spw-perl6-course.pdf>`

Both links are available on the Download link on the Perl 6 site shown earlier.

The REPL

Running Perl 6 code can be done using the REPL (Read-Eval-Print Loop). Within the terminal, type **perl6**, write your code and hit [Enter]

```
$ perl6
> say "Hello, World!";
Hello, World!
>
```

Use [Ctrl-D] to exit. The REPL is handy for experimenting and following along with tutorials.

You write longer programs inside a text file and then execute them as will be demonstrated in a bit.

Perl 6 handles rational numbers

One of Perl 6's many unique features. A rational number is defined as

```
... any number that can be expressed as the quotient or fraction
**p/q** of two integers, **p** and **q**, with the denominator, **q**,
not equal to zero.
```

Some rational numbers are

```
2/3
1/7
```

Perl 6 handles rational numbers (2)

Normally if we carry out the division we get a real number:

```
> my $a = 2/3  
0.666667  
> my $b = 1/7  
0.142857  
> say $a * $b  
0.095238
```

But we can see the values carry the rational numbers along with them:

```
> say $a.nude  
(2 3)  
> say ($a * $b).nude  
(2 21)
```

Perl 6 handles rational numbers (3)

We can also represent a real number in rational form:

```
> say 2.3287.nude  
(23287 10000)
```

(**demo**)

Perl 6 uses modules in a similar way to Perl 5. One of the strengths of Perl 5 are the thousands of modules available on what is known as CPAN:

- <http://www.cpan.org/>

As you can imagine, Perl 6 users will need equivalent modules for Perl 6 development and there is a very active module development effort underway. (See the next slide for work-arounds for missing modules.)

Currently available modules are listed here:

- [<https://modules.perl6.org/>](https://modules.perl6.org/)

If you are working on a program and find you need a certain module you used in Perl 5 and it is not currently available, you can add it to the list of most wanted modules as described on the link above.

By the way, I got into that situation as I started diving into Perl 6 last year and I am working on translating module **Geo::Ellipsoid** which you will see in that list.

- Much help on the Perl 6 website.
- One can use Perl 5 code in Perl 6 with appropriate measures (I have not yet experimented with that).
- There are two Perl 5 to Perl 6 translators available (I have not experimented with that either).
- If you are a Perl 5 user and are interested in Perl 6, there is lots of work to do in providing translation of Perl 5 modules to Perl 6 form.

- Today we have taken a look at the newly-released, stable version of Perl 6.
- If you are interested in continuing into the Perl 6 world, consider joining our local Perl Mongers group.
 - If we have enough interest, we can also start a regular class in Perl 6 and use the Niceville library for meetings.
- I am glad to help via e-mail (please mention Computer Tech 2016 in the subject):
 - [tom.browder@gmail.com]

One last word

From my experience, the Perl 6 community is somewhat rare in the sometimes rough and unfriendly world of open source software development. The folks are helpful, friendly, patient, kind, and welcoming of all who want to participate.

Larry Wall and his attitudes permeate the community. Google him to find out much more about him and his activities.

We believe Perl 6 is a leading modern programming language and are advocating Perl 6 to be the new language for teaching introductory programming (and to replace Python).

If you would like to contribute to a very worthy endeavor, Perl 6 is one to consider. You don't have to be a developer. either. Technical writers and web designers are always in short supply.

If your children or grandchildren have the least interest in the technical field, I highly recommend you pointing them to Perl 6.