



Developer
Days
2013

Extending Qt Creator (without writing code)

Tobias Hunger





Configuration



Configuration



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User configuration

- `~/.config/QtProject/` (`QtCreator*` | `qtcreator/*`)
- Can be changed by “`-settingspath <path>`” argument
- sqlite db + .ini file
- XML files (and more) in `qtcreator` subfolder
- Leave alone
- Possible exception: Sessions (* .qws)



Configuration



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System wide configuration

- `../share/qtcreator/QtProject/*`
- Same as above (without sqlite file)
- XML files, .ini-file
- Use `sdktool` to edit XML files



Configuration



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Project configuration

- .user and .shared file
- XML files
- No tool for .shared file, leave .user alone
- **Do not check in .user files!**



Built-in Tools



Editors



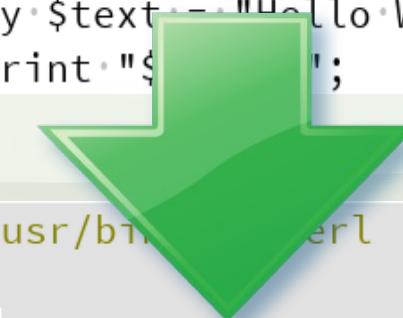
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Generic Highlighters

- Configure via
Tools>Options>
Text Editor>
Generic Highlighter
- or by putting files into
..../share/qtcreator/
generic-highlighter

A highlight definition was not found for this file. Would you like to try to find one?

```
1 #!/usr/bin/env perl
2
3 use strict;
4 use warnings;
5
6 sub test {
7     my $text = "Hello World!";
8     print "$text\n";
9 }
```



```
1 #!/usr/bin/env perl
2
3 use strict;
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6 sub test {
7     my $text = "Hello World!";
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9 }
```



Editors



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Macros

- Custom complex edit operations
- Configure via Tools>Macros
- No global configuration, user configuration in
 `.../QtProject/qtcreator/macros` (binary
 files)



Documentation



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Custom Documentation

- Configure via
Tools>Options>
Help>Documentation
- or by putting
[Help]
InstalledDocumentation=/path/to/dir
(Comma separated list of paths) into `QtCreator.ini`

```
#include <iostream>

int main(int argc, char *argv)
{
    std::cout() << "tmp" << s
    appPath std::basic_ostream F1
    printf("\nQt Creator Debu
    printf("Running query pro
    qDumpObjectData440(1, 42,
```



Debugger



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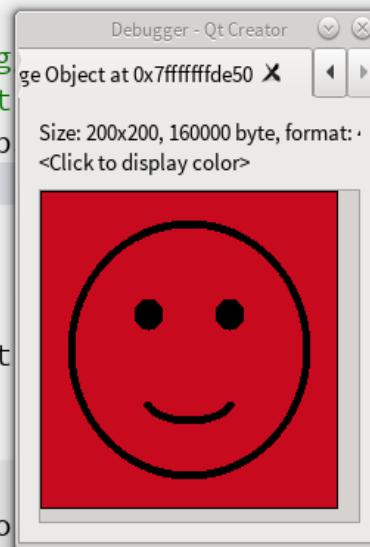
- GDB/LLDB

Python code in shared/qtcreator/dumper/qttypes.py

or register own files in

Tools>Options>Debugger>GDB>
Additional Startup Commands

- **qtdump_type_name**(d, value)
- **qtedit_type_name**(d, value)



Debugger - Qt Creator

ge Object at 0x7fffffffde50 X

Size: 200x200, 160000 byte, format: ·
<Click to display color>

```
476 ..... // Manual: Toggle
477 ..... // Manual: Enter
478 ..... pain.drawEllipse();
479 ..... |BREAK_HERE;
480 ..... // Continue.
481 ..... pain.end();
482 ..... dummyStatement
483 ..... #endif
484 .... }
485 ..... void testPeekAndPop()
486 .... }
```

A screenshot of the Qt Creator debugger interface. On the right, there's a preview window titled "Debugger - Qt Creator" showing a red square with a black smiley face. The main area shows a code editor with several lines of C++ code. Line 480 contains a breakpoint instruction: ".|BREAK_HERE;". The code also includes comments like "// Manual: Toggle", "// Manual: Enter", and "// Continue.". The code editor has a light gray background with syntax highlighting.

- CDB

C++ code in src/libs/qtcreatorcdbext (Qt Creator sources!)



Designer



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- Designer plugins for custom widgets

Pitfall: Plugin needs to be built for Qt Creator,
not for your project!

- Qml Designer offers similar feature for custom QML components



Projects



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- Custom Build-/Clean-/Deploy Steps
 - Run Custom Executables
 - Environment
 - Variable Substitution:
 - %{CurrentBuild:Name},
 - %{CurrentProject:FilePath},
 - %{CurrentDocument:Row},
 - %{CurrentKit:Id},
- ... many more!



External Tools



External Tools



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- Run stand-alone tools from Qt Creator
 - Configure executable, arguments, stdin, etc.
 - Many variables available
 - Output can be displayed or replace selected text or update the editor
- Edit using Tools>External>Configure . . .
- Drop files into
share/qtcreator/externaltools



Task Lists



- Import lists of “Build Issues” into Qt Creator
 - Quickly navigate issues with F6/Shift-F6
- Watches file for changes
- file\tline\t (warning|error) \tmessage
('\n' is expanded in message)



Code Generation



Snippets



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Add custom code snippets, modify existing snippets to suit your needs

- add via Tools>Options>Text Editor>Snippets
- XML files in share/qtcreator/snippets



Wizards



Create custom (sets of) files

- `wizard.xml`: Metadata + file list + description of UI fields
- Templates of other files to generate

Create subdirectory for your wizards in
share/qtcreator/templates/wizards



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You need to do more?



Qt Creator Plugin Development

Aurindam Jana
Tobias Hunger



Documentation

- Qt Creator Manual:
<http://qt-project.org/doc/qtcreator/index.html>
- Extending Qt Creator Manual:
<http://doc-snapshot.qt-project.org/qtcreator-extending/extending-index.html>
- Qt Creator mailing list:
<http://lists.qt-project.org/mailman/listinfo/qt-creator>
- IRC:
[#qt-creator on freenode.net](#)



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Thank you!

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