**Qt** DOCUMENTATION

搜索
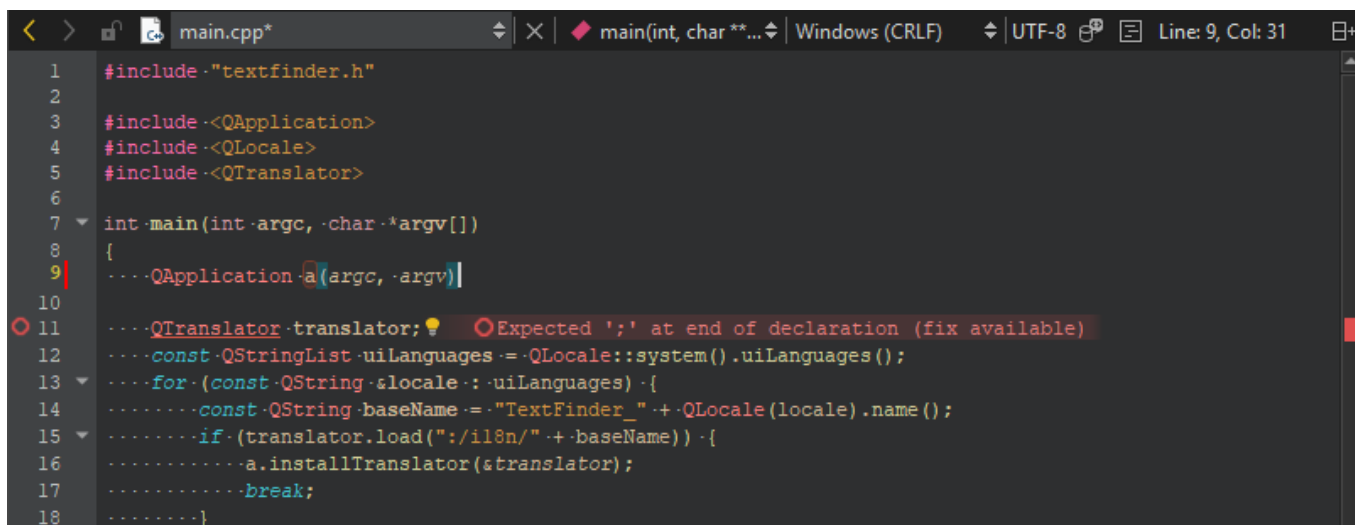
Qt 创建者手册 > 检查代码语法

# 检查代码语法

当您编写代码时，Qt创建者会检查代码语法。当Qt Creator发现代码中的语法错误时，它会加下划线，显示一个图标，并在您将鼠标指针移到错误或图标上时显示错误详细信息。如果有可用的修补程序，则可以通过单击💡来应用它。

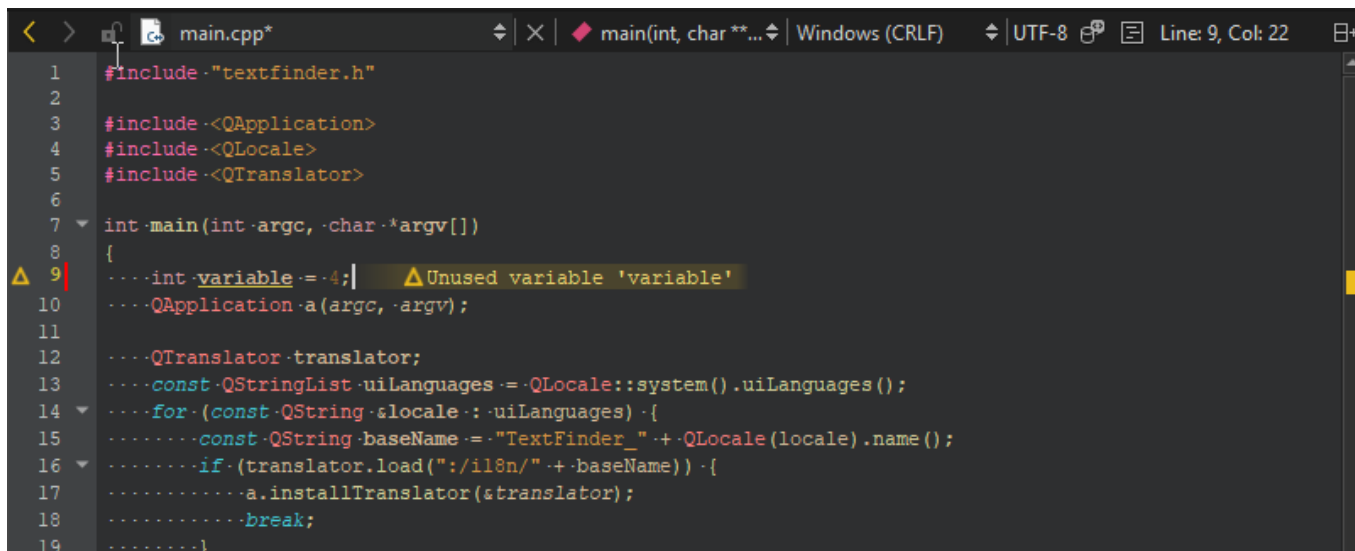同样，当您处理 JavaScript 对象表示法 （JSON） 实体的实例时，Qt 创建者会在 JSON 数据结构中为错误加下划线。

在下面的屏幕截图中，Qt Creator 注释了一个错误，因为行尾缺少一个分号：

```cpp
#include "textfinder.h"

#include <QApplication>
#include <QLocale>
#include <QTranslator>

int main(int argc, char *argv[])
{
    QApplication a(argc, argv)
    QTranslator translator;💡   Expected ';' at end of declaration (fix available)
    const QStringList uiLanguages = QLocale::system().uiLanguages();
    for (const QString &locale : uiLanguages) {
        const QString baseName = "TextFinder_" + QLocale(locale).name();
        if (translator.load(":/i18n/" + baseName)) {
            a.installTranslator(&translator);
            break;
        }
```

在下面的屏幕截图中，Qt Creator发出警告，因为未使用该变量：

```cpp
#include "textfinder.h"

#include <QApplication>
#include <QLocale>
#include <QTranslator>

int main(int argc, char *argv[])
{
    int variable = 4;       Unused variable 'variable'
    QApplication a(argc, argv);

    QTranslator translator;
    const QStringList uiLanguages = QLocale::system().uiLanguages();
    for (const QString &locale : uiLanguages) {
        const QString baseName = "TextFinder_" + QLocale(locale).name();
        if (translator.load(":/i18n/" + baseName)) {
            a.installTranslator(&translator);
            break;
        }
```

**Qt** DOCUMENTATION
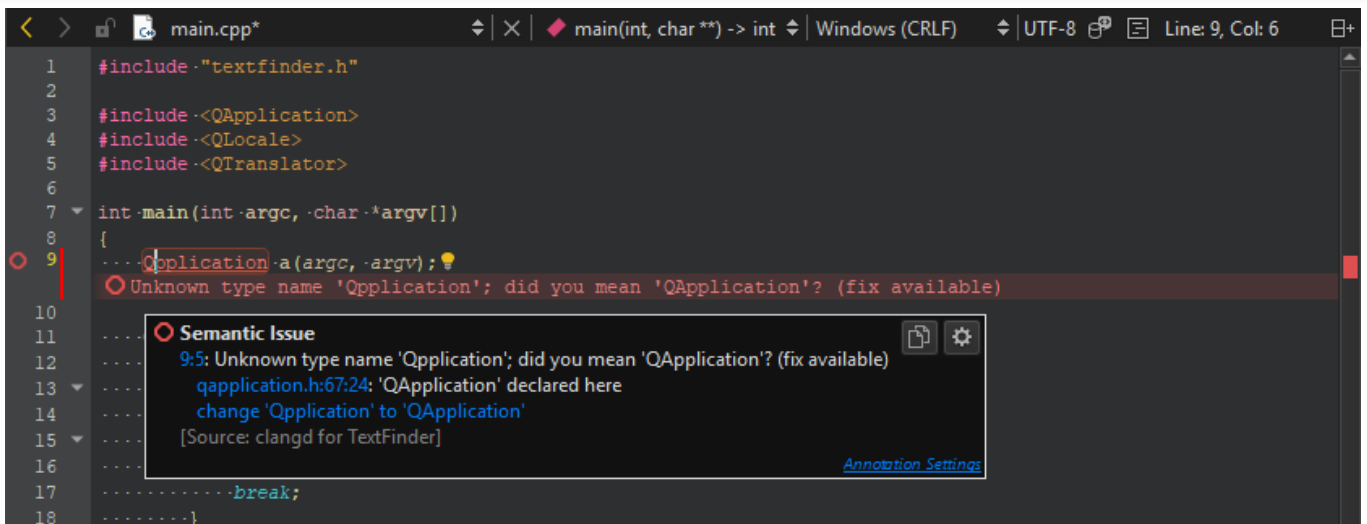


可以使用工具提示弹出窗口中的图标将错误或警告消息复制到剪贴板，或者忽略和隐藏它。选择"**批注设置**"链接以指定线条批注的位置。

要修改用于为错误和警告添加下划线的颜色，请选择"**编辑**>**首选项**">**文本编辑器**>"**字体**">"**颜色**>**复制**"，然后为"**错误**"和"**警告**"选择新颜色。

编写 QML 或脚本代码时，注释可能包含脚本中列出的错误代码和 QML 错误代码。
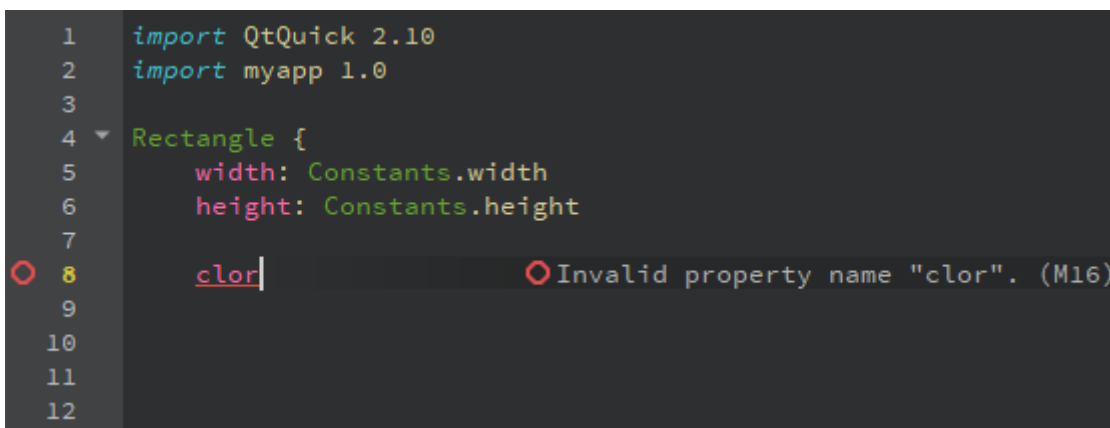


## Specifying Line Annotation Positions

To specify the position where the annotations are displayed, select **Edit** > **Preferences** > **Text Editor** > **Display** > **Line annotations**, and then select whether to display the annotations directly next to the code, aligned to the right of the code, or in the right margin. Showing annotations between lines can be useful if there is usually not enough space to display annotations next to the text.

**Qt DOCUMENTATION**
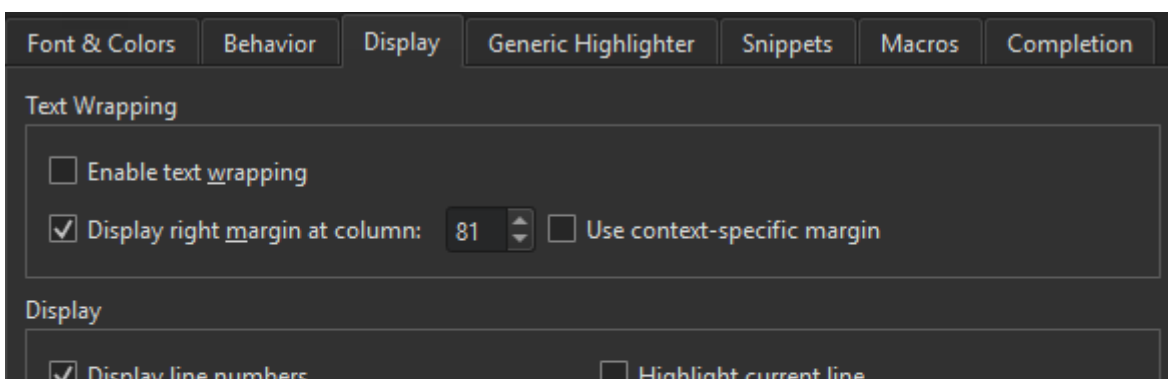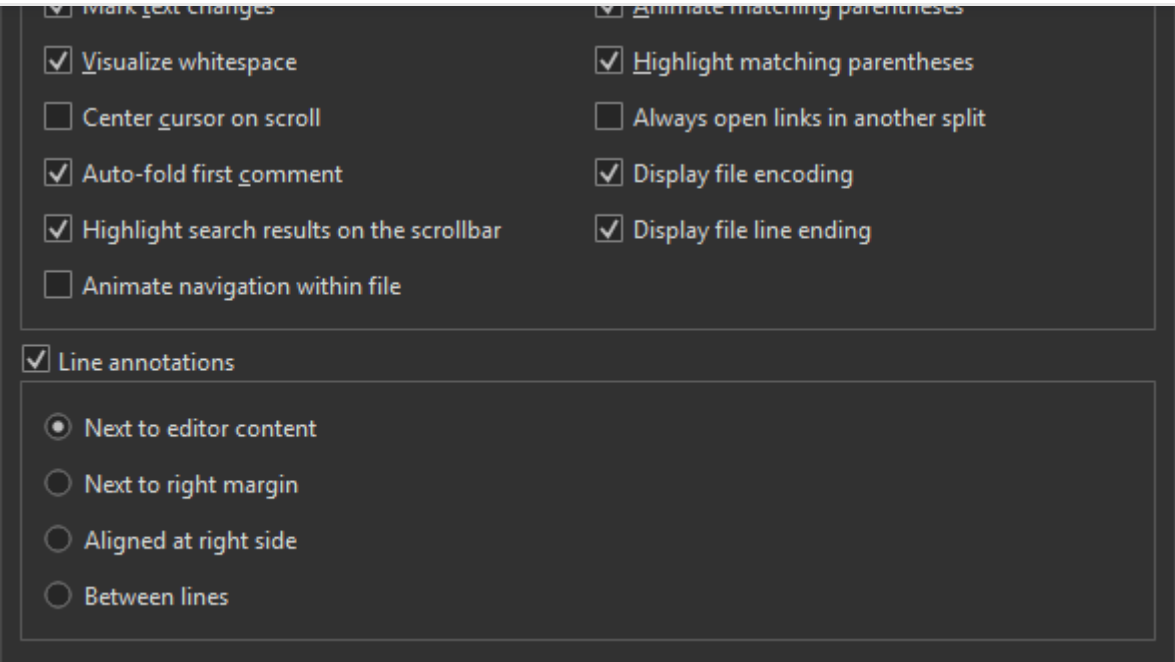


If you hide the annotations by deselecting the check box, you can move the mouse pointer over an icon to view them.

# JavaScript and QML Error Codes

You can run static checks on the QML and JavaScript code in your project to find common problems. To run the checks, select **Tools** > **QML/JS** > **Run Checks** or press **Ctrl+Shift+C**. The results are shown in the **QML** and **QML Analysis** filters in Issues.

Many of the error messages are similar to the ones in Douglas Crockford's JSLint tool. For more information about JSLint errors, see JSLint Error Explanations.

| Id | Severity | Message | Description |
|-----|----------|---------|-------------|
| M1 | Error | Invalid value for enum | |
| M2 | Error | Enum value must be a string or a number | |
| M3 | Error | Number value expected | |
| M4 | Error | Boolean value expected | |
| M5 | Error | String value expected | |
| M6 | Error | Invalid URL | |
| M7 | Warning | File or directory does not exist | |
| M8 | Error | Invalid color | |
| M9 | Error | Anchor line expected | |
| M10 | Error | Duplicate property binding | See also: Duplicate key '{a}'. |
| M11 | Error | Id expected | See also: Expected an identifier and instead saw '{a}' (a reserved word). |
| M14 | Error | Invalid id | See also: Expected an identifier and instead saw '{a}' (a reserved word). |
| **Id** | **Severity** | **Message** | **Description** |

**Qt** DOCUMENTATION

| Id | Severity | Message | Description |
|---|---|---|---|
| M16 | Error | Invalid property name `name` | |
| M17 | Error | `Name` does not have members | |
| M18 | Error | `Field` is not a member of `object` | |
| M19 | Warning | Assignment in condition | It could be a typing error. If it is intentional, wrap the assignment in parentheses. |
| M20 | Warning | Unterminated non-empty case block | Case blocks should either be empty or end in a flow control statement such as , or . Alternatively you can indicate intentional fall through by ending with a comment.`break``return``continue``// fall through` |
| M23 | Warning | Do not use `eval` | See also: eval is evil. |
| M28 | Warning | Unreachable | Indicates that the underlined statement will never be executed. |
| M29 | Warning | Do not use `with` | See also: Unexpected 'with'. |
| M30 | Warning | Do not use comma expressions | |
| M31 | Warning | Unnecessary message suppression | |
| M103 | Warning | `Name` is already a formal parameter | |
| M104 | Warning | `Name` is already a function | |
| M105 | Warning | Var is used before its declaration`name` | |
| M106 | Warning | `Name` already is a var | |
| M107 | Warning | `Name` is declared more than once | Variables declared in a function are always visible everywhere in the function, even when declared in nested blocks or statement conditions. Redeclaring a variable has no effect.`for` |
| M108 | Warning | Function is used before its declaration`name` | See also: {a} was used before it was defined. |
| M109 | Warning | Do not use as a constructor`Boolean` | See also: Do not use {a} as a constructor. |
| M110 | Warning | Do not use as a constructor`String` | See also: Do not use {a} as a constructor. |
| M111 | Warning | Do not use as a constructor`Object` | See also: Do not use {a} as a constructor. |
| M112 | Warning | Do not use as a constructor`Array` | See also: Do not use {a} as a constructor. |
| M113 | Warning | Do not use as a constructor`Function` | See also: Do not use {a} as a constructor. |
| M114 | Hint | The keyword and the opening parenthesis should be separated by a single space`function` | See also: Expected exactly one space between {a} and {b}. |
| Id | Severity | Message | Description |

**Qt** DOCUMENTATION

| Id | Severity | Message | Description |
|----|----------|---------|-------------|
| M116 | Warning | Do not use void expressions | |
| M117 | Warning | Confusing pluses | See also: Confusing pluses. |
| M119 | Warning | Confusing minuses | See also: Confusing minuses. |
| M121 | Hint | Declare all function vars on a single line | |
| M123 | Hint | Unnecessary parentheses | |
| M126 | Warning | == and may perform type coercion, use or to avoid it ! ==== ! == | The non-strict equality comparison is allowed to convert its arguments to a common type. That can lead to unexpected results such as being true. Use the strict equality operators and and be explicit about conversions you require. ` '\t\r\n' == 0===!==` |
| M127 | Warning | Expression statements should be assignments, calls or delete expressions only | |
| M128 | Error | A state cannot have the specified child item | |
| M129 | Error | Type cannot be instantiated recursively | |
| M201 | Hint | Place var declarations at the start of a function | See also: Move 'var' declarations to the top of the function. |
| M202 | Hint | Use only one statement per line | |
| M220 | Error | This type (type name) is not supported as a root element of a UI file (.ui.qml) | For more information about supported QML types, see UI Files. |
| M221 | Error | This type (type name) is not supported in a UI file (.ui.qml) | For more information about supported QML types, see UI Files. |
| M222 | Error | Functions are not supported in a UI file (.ui.qml) | For a list of supported JavaScript functions, see Supported Methods. |
| M223 | Error | JavaScript blocks are not supported in a UI file (.ui.qml) | For more information about supported features, see UI Files. |
| M224 | Error | Behavior type is not supported in a UI file (.ui.qml) | For more information about supported QML types, see UI Files. |
| M225 | Error | States are only supported in the root item in a UI file (.ui.qml) | For more information about supported features, see UI Files. |
| M226 | Error | Referencing the parent of the root item is not supported in a UI file (.ui.qml) | For more information about supported features, see UI Files. |
| M227 | Error | Do not mix translation functions in a UI file (.ui.qml) | Even though several different translation functions, such as and are supported, you should pick one and use it consistently within a UI file. For more information, see Qt QML Methods.`qsTrqsTrId` |
| M300 | Error | Unknown component | Description |

**Qt DOCUMENTATION**

| Id | Severity | Message | Description |
|---|---|---|---|
| M302 | Error | Could not resolve the prototype `name` | |
| M303 | Error | Prototype cycle, the last non-repeated component is `name` | |
| M304 | Error | Invalid property type `name` | |
| M305 | Warning | `==` and perform type coercion, use or to avoid it `!====!==` | See M126. |
| M306 | Warning | Calls of functions that start with an uppercase letter should use `new` | By convention, functions that start with an uppercase letter are constructor functions that should only be used with `.new` |
| M307 | Warning | Use only with functions that start with an uppercase letter`new` | See also: Do not use {a} as a constructor. |
| M308 | Warning | Do not use as a constructor`Number` | See also: Do not use {a} as a constructor. |
| M309 | Hint | Use spaces around binary operators | |
| M310 | Warning | Unintentional empty block, use ({}) for empty object literal | |
| M311 | Hint | Use instead of or to improve performance`typevarvariant` | |
| M312 | Error | Missing property `number` | |
| M313 | Error | Object value expected | |
| M314 | Error | Array value expected | |
| M315 | Error | `Value` value expected | |
| M316 | Error | Maximum number value is `number` | |
| M317 | Error | Minimum number value is `number` | |
| M318 | Error | Maximum number value is exclusive | |
| M319 | Error | Minimum number value is exclusive | |
| M320 | Error | String value does not match required pattern | |
| M321 | Error | Minimum string value length is `number` | |
| M322 | Error | Maximum string value length is `number` | |
| M323 | Error | `Number` elements expected in array value | See also: The array literal notation [] is preferable. |
| M324 | Error | Hit maximum recursion limit | |

**Qt DOCUMENTATION**

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|---|---|---|---|
| M325 | Warning | Logical value does not depend on actual values | |
| M326 | Error | Components are only allowed to have a single child element | For more information, see Component. |
| M327 | Warning | Components require a child element | For more information, see Component. |
| M400 | Warning | Duplicate import | An import statement has been added twice. For more information, see Import Statements. |

## Resetting the Code Model

If you change the build and run kit when you have QML files open in the code editor, the code model might become corrupt. The following error message indicates that this might have happened: *Using Qt Quick 1 code model instead of Qt Quick 2.*

You can see the error message when you move the mouse pointer over code that Qt Creator underlines in the code editor or when you open a QML file in Qt Design Studio.

To reset the code model, select **Tools** > **QML/JS** > **Reset Code Model**.
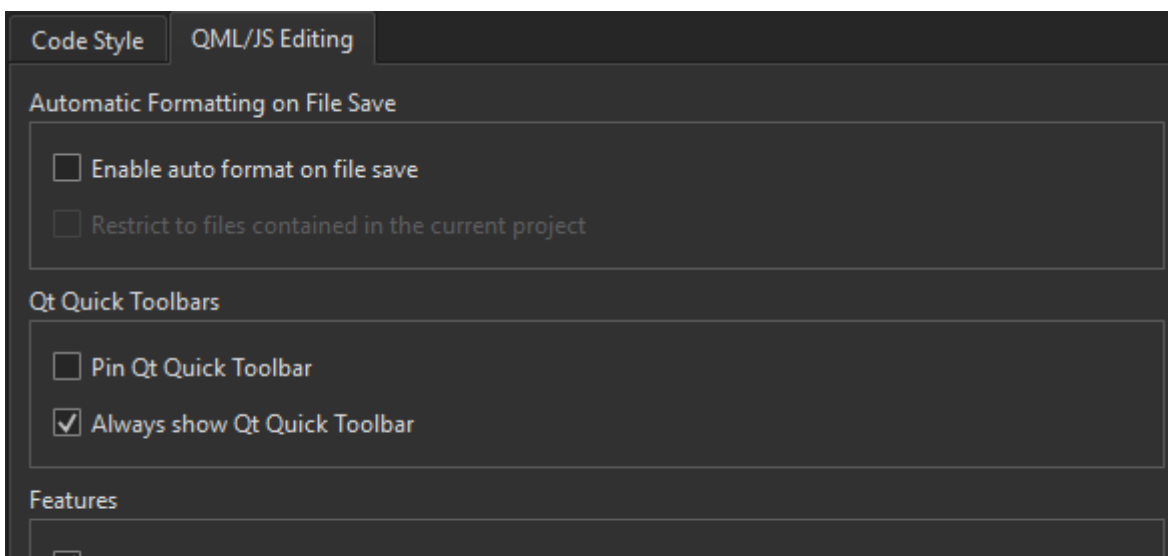
If this does not help, try changing the QML emulation layer to the one that was built with the same Qt version as the one selected in the build and run kit.

## Inspecting QML and JavaScript

To inspect QML and JavaScript properties, methods, and enums, move the cursor over them and select **Tools** > **QML/JS** > **Inspect API for Element Under Cursor**.

## Automatically Formatting QML/JS Files

To automatically format QML/JS files upon saving, select **Edit** > **Preferences** > **Qt Quick** > **QML/JS Editing** > **Enable auto format on file save**.

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‹ Semantic Highlighting                                                    Completing Code ›

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