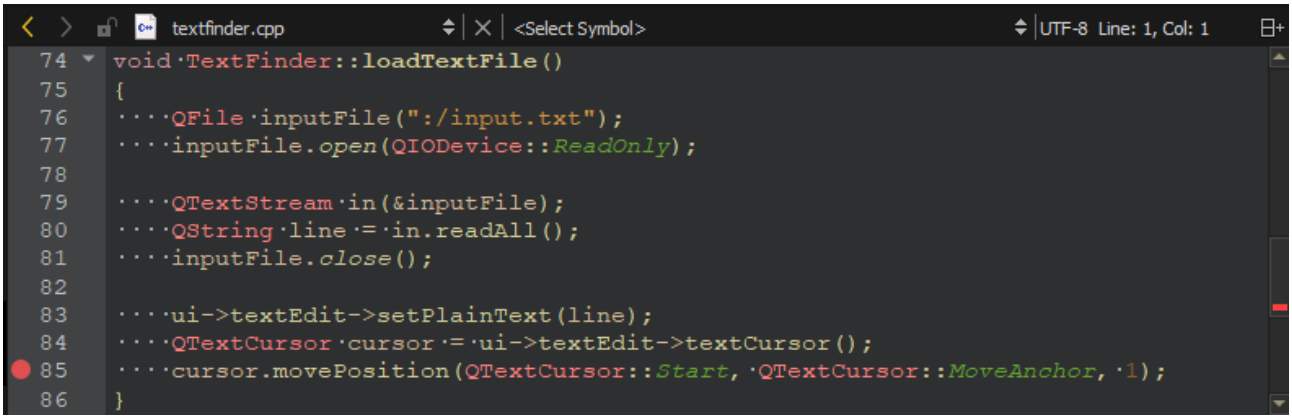
Debugging a C++ Example Application

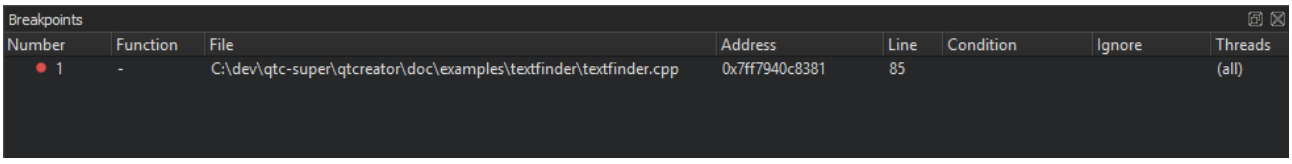
This section uses the TextFinder example to illustrate how to debug Qt C++ applications in the **Debug** mode.

TextFinder reads a text file into QString and then displays it with QTextEdit. To look at the TextFinder class and see the stored data, place a breakpoint in textfinder.cpp, as follows:

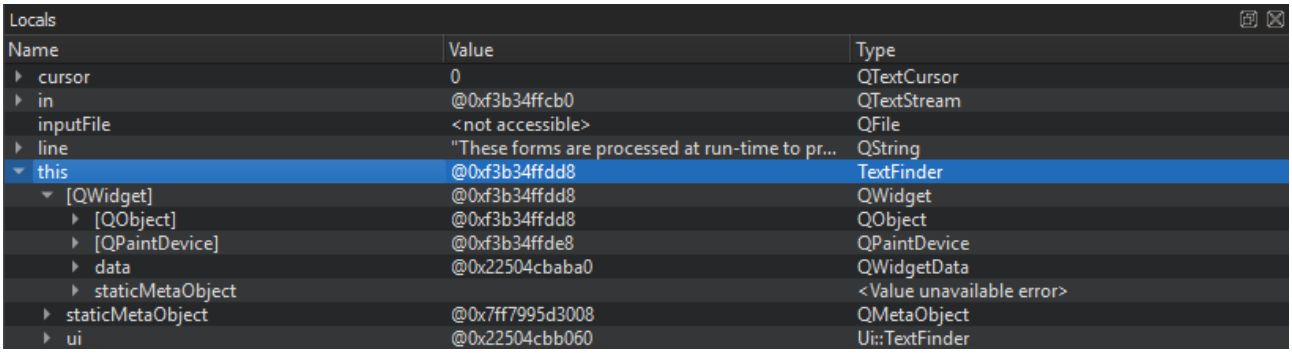
1. Click in between the line number and the window border on the line where we change the cursor position to set a breakpoint.



2. Select **Debug** > **Start Debugging** > **Start Debugging of Startup Project** or press **F5**.
3. To view information about the breakpoint, go to the **Breakpoints** view.



4. To remove a breakpoint, right-click it and select **Delete Breakpoint**.
5. To view the base classes and data members of the TextFinder class, go to the **Locals** view.



Modify the `on_findButton_clicked()` function to move back to the start of the document and continue searching once the cursor hits the end of the document. Add the following code snippet:

```
void TextFinder::on_findButton_clicked()
{
    QString searchString = ui->lineEdit->text();

    QTextDocument *document = ui->textEdit->document();
    QTextCursor cursor = ui->textEdit->textCursor();
    cursor = document->find(searchString, cursor,
        QTextDocument::FindWholeWords);
    ui->textEdit->setTextCursor(cursor);

    bool found = cursor.isNull();

    if (!found && previouslyFound) {
        int ret = QMessageBox::question(this, tr("End of Document"),
        tr("I have reached the end of the document. Would you like "
        "me to start searching from the beginning of the document?"),
        QMessageBox::Yes | QMessageBox::No, QMessageBox::Yes);

        if (ret == QMessageBox::Yes) {
            cursor = document->find(searchString,
                QTextDocument::FindWholeWords);
            ui->textEdit->setTextCursor(cursor);
        } else
            return;
    }
    previouslyFound = found;
}
```

If you compile and run the above code, however, the application does not work correctly due to a logic error. To locate this logic error, step through the code using the following buttons: (**Stop Debugger**), (**Step Over**), (**Step Into**), and (**Step Out**).

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