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Project: Lab 5 concept location

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Group Number: 1

**Lab 5 Concept Location**

1. **Change Request and concepts*:***

Locate the following concepts: Icons, Color palette, Fill tool within the easyPaint project.

1. **Concept Location:**

I used grep for 2 of the concepts and dependency search for the remaining concept. All concept locations are color coded in purple text.

**Table Dependency Search: Color palette**

|  |  |  |  |
| --- | --- | --- | --- |
| **Class/file name** | **Tool used** | **Mark** | **Comments** |
| Main | Find in files | Unchanged | No find |
| Palletebar.cpp | Call Hierarchy | Located | Contains list of all colors in the color pallet |
| Toolbar.cpp | Call Hierarchy | Unchanged | Gives defining features to the pallet bar but not the colors |
| Mainwindow.cpp | Call Hierarchy | Changed | Changing the colors in the pallet bar changes how it needs to be defined in mainwindow |
| Colorchooser.cpp | Find all references | Propagating | Changes based off selection, used in toolbar |
| Palletebutton.cpp | Call Hierarchy | Propagating | Changes to the palletebar and added here but the overall class is unaffected |

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**Table Grep Search: Icons**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Concept** | **Query** | **#Results** | **Target class/file** | **Tool used** | **Comments** |
| Icons | Icons | 0 | main | Quick Find | No hits in the main file |
| Icons | Icons | 5 | Current project | Find in files | 145 matching lines 5 files matched search 171 files |
| Icons | Icons | 4 | Imagearea | Find in files | 4 hits in switch DataSingleton::Instance()->getInstrument. Which is inside of ImageArea::restoreCursor() |
| Icons | Instance() | 1 | Datasingleton | Quick find | Method of class DataSingleton appears to exist to either make or return an instance. Unchanged by Icon but is propogated by getInstrument() |
| Icons | getInstrument() | 1 | Datasingleton | Quick find | Public method of datasingleton implemented in header returns mCurrentInstrument |
| Icons | mCurrentInstrument | 1 | Datasingleton | Quick find | mCurrentInstrument is a private member along with mPreviousInstrument. Both are a part of InstrumentsEnum |
| Icons | mPreviousInstrument | 4 | Current project | Find in files | mPreviousInstrument is only used natively in datasingleton.h |
| Icons | InstrumentsEnum | 1 | Current Project | Find in files | InstrumentsEnum is an enumerator type which appears to hold data for icons it has several calls in mainwindow, main and datasingleton. And is a concept location |
| Icons | Icons | 30 | Mainwindow | Find in files | All mentions are in MainWindow::initializeMainMenu(). QIcon appears to call all implementation, most are part of fromTheme function makes use of all icons and gives them names. This is a concept location after further study of datasingleton which does have its own use to the GUI but does not have its own images |
| Icons | fromTheme | 1 | QIcon | Find in files | Header for qt Icon fromTheme() function takes a name and a back-up location |
| Icons | Icons | 2 | Shortcutedit | Find in files | 2 members of ShortcutEdit constructor |
| Icons | mClearButton | 1 | Shortcutedit | Find in files | Pointer of QToolButton does not make use of significant concept |
| Icons | QPixmap | 1 | Qpixmap | Find in files | Class of mapping functions for images but does not directly control or contain icons. Not the concept location |
| Icons | Icons | 35 | Resources | Find in files | Several files named using the word icon or icons |
| Icons | media/instruments-icons/cursor.png | 4 | Resources | Find in files | This icon file name along with all the others appear here and in Qmainwindow::initializeMainMenu(). Adding credibility to the assumption that initializeMainMenu is a concept location for icons. This file is also a concept location since it holds the actual storage of the icons. |
| Icons | Icons | 69 | qrc\_resources | Find in files | Machine code, all mentions of icon are comments not the concept location |

**Table Grep Search: Fill Tool**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Concept** | **Query** | **#Results** | **Target class/file** | **Tool used** | **Comments** |
| Fill tool | Fill tool | 0 | Current project | Quick find | No hits adjust query |
| Fill tool | Fill | 49 | Current project | Find in files | Several hits in fillinstrument,imagearea,mainwindow,and toolbar |
| Fill tool | Fill | 2 | Toolbar | Find in files | Variable names contain the word fill not significant |
| Fill tool | Fill | 8 | Mainwindow | Find in files | Calls and uses some fill operations but not much going on implementation wise |
| Fill tool | Fill | 10 | Imagearea | Find in files | Several functions here call fill handlers also fillInstrument is called here |
| Fill tool | Fill | 12 | fillInstrument | Find in files | Class dedicated to handling the fill functions and painting. Concept location here. |