Mainwindow.cpp

1. Mainwindow::on\_loginbutton\_clicked() O(1)

if(ui->UserLineEdit->text() == "admin" && ui->PWLineEdit->text() == "potato")

The two lines edits, UserLineEdit and PWLineEdit, read in two strings in constant time. The string that is valid for UserLineEdit is “admin” whereas the string that is valid for PWLineEdit is “potato”. Ultimately, the constant checks for these two valid strings. If either of the line edits are NULL or the value inputted in the line edits do not match, a QMessageBox Critical will appear. This will deny them access to the admin page. Conclusively, the Big O of this function is 1 or constant. Regardless of user input, the program does not run inefficiently.

adminpage.cpp

1. adminpage::on\_deleteSouvenirConfirmBtn\_clicked() O(1)

if(data.exec())

 {

       QMessageBox::about(this, "", "The item was deleted. Double check if an error occured");

   }

   else

   {

       QMessageBox::about(this, "Error", "Value not found double check path to database!");

   }

The line edit, deletePageSouvenirName\_line, reads in a string in constant time. The combo box, deletePagecomboBox, has the user select an existing string also in constant time. The constant will check if the line edit does not contain values that are either an integer or NULL. If the constant remains true, then the QSqlQuery variable will execute and output a QMessageBox statement and perform the action on the database. If the constant discontinues, then it will output a QMessageBox statement and halt any action on the database. Thus, the Big O of this function is 1 or constant. Regardless of user input, the performance of the foreseeable database execution will not run inefficiently.