

T A S U K E

The Developer’s guide

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# 1. PREFACE

* 1.1 Introduction

Welcome to the Tasuke Developer Guide!

Tasuke is a desktop task and event manager aimed at individuals who are comfortable with keyboard-based commands for rapid data entry and retrieval. Tasuke will appeal to users who are familiar with the command-line-like style of calling and dismissing programs, and yet provides a simple but powerful GUI for clearer data organization and fine-tuning.

The basic functionality of Tasuke is adding, editing and removing of tasks and events; marking tasks as done or otherwise; setting a starting time and deadline for tasks and events; adding tags to tasks and events; searching for tasks by date, completion and tags, and sorting the search result.

This guide aims to provide the reader with practical information of the design and implementation of Tasuke. This guide will detail the organization of the software, its API, and provide solutions for future development. This guide will also provide information in assisting with troubleshooting the program should the need arise.

* 1.2 Who should read this document?

This document is a guide intended for developers and maintainers of Tasuke.

Tasuke is written in C++ using the Qt framework for the Windows platform, and this document thus assumes that the reader is familiar with C++ at least. It is optimal if the reader is also familiar with Qt, but that is not a necessity.

* 1.3 Concept and Design

Tasuke was developed with speed and simplicity as its goal. Tasuke is lightweight in terms of computer resource consumption; it is easy to learn to use and neatly folds itself away when the information entry is done.

Tasuke takes input using an interface not unlike that of a command-line, and produces output in a visually minimal graphical window on screen. When the user is only adding a task, he or she will only need to see the input box, and the graphical window is displayed only when the user chooses to do so.

In order for the program to be intuitive, the user commands for Tasuke follows normal English sentences loosely, and is similar to some SQL statements. For more details on commands available to the user, see §8.1, at page <PAGENUM>

This principle should be followed as close as possible when developing and maintaining Tasuke.

* 1.4 Organization of this document

This document is written in such a way that debugging and troubleshooting Tasuke is done in a top-down manner. Thus, it can generally be divided into 3 parts: External, Intermediate and Internal. External refers to the external factors that can affect the programming and operation of Tasuke, intermediate refers to the expected flow and execution of Tasuke, and Internal refers to the actual code that Tasuke runs on.

This document will first explain the environment needed to develop and maintain Tasuke optimally, and provide detail on optimal execution environment of Tasuke as well as the files it generates. Then, this will explain the software architecture that is involved from input to output. Finally, this will provide detail on the implementation and API involved in the programming.

* 1.5 Conventions and Definitions

In this document, a **task** or an **event** refer to an object that a user will create when he or she types the *add* command followed by a task or event description. The terms are used interchangeably.

Whenever this document mentions **Windows**, this refers to the default build and execution environment, which is Microsoft Windows 7 and newer iterations of the operating system.

All code and filenames are written using the Courier New font at font size 11. When describing methods and functions, the parameters are written in *Calibri Italic* and the return values are written in **Calibri Bold**.

A list of technical terms may be found in the Glossary. This guide is written assuming the reader is using a Windows environment to develop and maintain Tasuke.

* 1.6 Related Documents

As Tasuke is written with Qt 5.2.1, please refer to <http://qt-project.org/doc/> for the latest documentation relating to the methods and functions written with Qt. However, this document will attempt to annotate functions and methods that are from Qt and are used in Tasuke.

* 1.7 Updates and Feedback

The latest version of this document may be obtained when pulling the tip of the repository from Google Code at <http://code.google.com/p/cs2103jan2014-w15-2c/> or it may be downloaded by itself from <INSERT LINK>.

Feedback may be provided by raising an issue on the aforementioned Google Code website.

# 2. TASUKE build environment

* 2.1 Development Environment

Tasuke is written in the C++ programming language, using the Qt 5.2.1 library. It is compiled and written in Microsoft Visual Studio 2012 Ultimate, on Microsoft Windows 7 and Microsoft Windows 8. Therefore, the recommended development environment is as such.

As Qt is a cross-platform application framework, all code written within Tasuke is platform-agnostic. It is, in theory, possible to compile the source code of Tasuke on any platform, for any platform, given the right developing environment. However, this guide is written with developers and users of Microsoft Windows 7 and later in mind. Thus, this guide will not discuss issues arising when Tasuke is compiled in any platform besides Windows.

* 2.1 Execution Environment

The recommended execution environment for the default build of Tasuke is Windows 7 and newer. No additional framework or library needs to be installed, and Tasuke itself does not require installation and may be run straight from the executable binary.

During its operation, Tasuke may create an .ini file in the %APPDATA% directory.

* 2.1 Application Files

Tasuke.sln is the Visual Studio Solution file and should be the entry point when developing Tasuke. Open this using Microsoft Visual Studio to begin browsing the code for Tasuke.

A full list of the files in the project can be found in §8.2, at page <PAGENUM>.

# 3. Software Architecture

<Insert software architecture diagram here>

<Caption goes here>

Tasuke uses three-layer architecture. The components of Tasuke can be identified as three main groups, as shown above.

The User Interface layer consists of