

# Design Document

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“...I have always found that plans are useless, but planning is indispensable.”  
- Dwight D. Eisenhower

## 1. Introduction to Document

### 1.1 Purpose of the Product

*Knightingale* is a *Twitter* analytics tool. Whether it's helping businesses better figure out to whom to market their products, aiding clinical psychologists understand the impact of social media on anxiety disorders, or making navigating *Twitter* easier for young adults, *Knightingale* is intended for all users.

The *Software Design Document* is intended principally for the development team and their professor at *Allegheny College*, *Dr. Gregory Kapfhammer*. This document provides a description of the functions of *Knightingale* at a low-level of detail.

### 1.2 Document Conventions

This document was written following *IEEE* conventions. It was formatted with  $\text{\LaTeX}$ . This is the most low-level of the trio of documents; the architecture document is at a higher level of description, and the requirements document is more concerned with the high-level concepts and expectations of the product.

Names, classes, and methods will be italicized, and both numbers and variables are modified with the  $\$$  wrapper in  $\text{\LaTeX}$ .

### 1.3 Acronyms, Abbreviations, and Definitions

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### 1.4 Scope of the Product

*Knightingale* is a *Twitter* analytics system. Refer to Section 1.4 of the Requirements Document.

## 1.5 References

## 1.6 Outline of the rest of the SRS

Section 2: System Overview

Section 3: Data Design

Section 3.1: Data Description

Section 3.3: Component Design

Section 4: Human Interface Design

Section 4.1: Overview of User Interface

Section 4.3: Screen Objects and Actions

## 2. System Overview

*Knightingale* was, at least in theory, conceived by *Dr. Gregory Kapfhammer* at *Allegheny College*. He assigned the creation of the system to the students in his *Computer Science 290 Principles of Software Development* class as their final project. Four teams of five students would each develop their own *Twitter* analytics system. *Knightingale* is one of those systems.

What sets *Knightingale* apart from its competition is its user-friendly interface. **More on this.**

To further develop an example given in Section 1.1, consider the situation of a clinical psychologist. It is common knowledge that a person's use of social media can be linked to their loneliness. The clinical psychologist might use the metrics provided by *Knightingale* to better understand her client.

## 3. Data Design

### 3.1 Data Description

The information domain of *Knightingale* is the *.ZIP* file downloaded from *Twitter*. The classes *DatabaseHelper.java* takes all of this information from the parser

Explain how the information domain of your system is transformed into data structures. Describe how the major data of system entities are stored, processed and organized. List any databases or data storage items.

### 3.2 Component Design

- Go through classes - What are the methods and what do they do?

In this section, we take a closer look at what each component does in a more systematic way. Describe any local data when necessary.

## 4. Human Interface Design

### 4.1 Overview of User Interface

Describe the functional of the system from the users perspective. Explain how the user will be able to use your system to complete all the expected features and the feedback information that will be displayed for the user.

### 4.2 Screen Objects and Actions

A discussion of screen objects and actions associated with those objects.