**Wikiglass Analyzer**

***User requirements analyses***

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# INTRODUCTION

## Purpose of this document

This document provides an outline of the scope of the Wikiglass Analyzer Project and an overview of the entire User Requirement document. This document will be referred at the system design phase of the project.

## Overview

This document is divided into three parts: Introduction , General description, and Specific requirements. In the first, we will describe the purpose of this document, overview of the whole document and some definitions and abbreviations that may be used in later parts.

## Definitions, acronyms and abbreviations

This section provide the definitions of all terms, acronyms, and abbreviations, or refer to other documents where the definitions can be found.

|  |  |
| --- | --- |
| Terms | Description |
| wiki | An independent mediawiki site. In our mediawiki system, every wiki is completely separate from each other. |
| page | A single page in mediawiki |
| revision | Any edit done to the content of a wiki |
| sentence quality | Quality of a sentence. They are categorized into three classes: high(3), medium(2) and low(1) |

# GENERAL DESCRIPTION

## Objective

Specify what the Wikiglass Analyzer Project is intended to achieve.

This is a subproject of the data visualization system called wikiglass. There are two subprojects that belong to the wikiglass project. One is Wikiglass Website which provide the user interface for the system. The other is this Wikiglass Analyzer which is responsible for the data preparation and data analysis.

## System concept

The system is developed by python 3 and runs on linux system. The wiki website is powered by mediawiki. And the databased used by the system is MySQL. For the ease of setting up operating environment, the system should operate in conda virtual envrionment.

## System architecture

Give a preliminary idea of what components the system is expected to have, and how they will be used.

The Wikiglass Analyzer system should contain three components, including data provider, data analyzer and scheduler.

The data provider is responsible for extracting, cleaning, transforming the data from mediawiki database.

The analyzer is responsible for analyzing the data that is provided by data provider. The analysed data are stored into wikiglass database for the query of Wikiglass Website.

The scheduler is responsible for scheduling the activities of data provider and data analyzer.

## System management

Specify system management requirements like system set-up, operational monitoring and control.

Required packages: Conda, Python3, Bluespice(an extension of mediawiki) and other packages specified in the requirements.txt of conda.

# SPECIFIC REQUIREMENTS

## General

Wikiglass Analyzer project is concerned with the implementation of data visualization of mediawiki.

## Functional requirements

Present the main functionalities of the system.

1. For each group of students, assign a separated wiki to them.
2. The system must be able to generate a summary email to each teacher each week.
3. The system should be able to provide the data as following:

**Statistics**

1. Module1: Revision count in each group

Needed data:

* + Group number
  + Number of revisions
  + Timestamp

1. Module2: Latest word count in each group

Needed data:

* + Group number
  + Word count
  + Timestamp

1. Module3: Sentence with higher order thinking in each group

Needed data:

* + Group Number
  + Number of high order thinking sentences
  + Timestamp

1. Module4: Sentence with low order thinking in each group

Needed data:

* + Group Number
  + Number of low order thinking sentences
  + Timestamp

1. Module5: Plagiarism sentence in each group

Needed data:

* + Group number
  + Number of plagiarism sentence
  + Timestamp

1. Module6: Reading relation in each group

Needed data:

* + From user name
  + To user name
  + Reading number
  + Time stamp

1. Module7: Revision relation in each group

Needed data:

* + From user name
  + To user name
  + Revision number
  + Time stamp

1. Module8: Number of pages revised by each student

Needed data:

* + User name
  + Number of pages revised
  + Timestamp

1. Module9: Number of revisions made by each student

Needed data:

* + User name
  + Number of revisions
  + Timestamp

1. Module10: Number of words added by each student

Needed data:

* + User name
  + Number of words
  + Timestamp

1. Module11: Number of high order thinking by each student

Needed data:

* + User name
  + Number of high order thinking sentences
  + Timestamp

1. Module12: Number of low order thinking by each student

Needed data:

* + User name
  + Number of low order thinking sentences
  + Timestamp

**Timeline**

1. Module1: Word amendment timeline

Needed data:

* + Group number
  + Number of word amendment
  + Timestamp

1. Module2: Number of high order thinking sentences timeline

Needed data:

* + Group number
  + Number of high order thinking sentences
  + Timestamp

1. Module3: Number of low order thinking sentences timeline

Needed data:

* + Group Number
  + Number of low order thinking sentences
  + Timestamp

1. Module4: Word amendment timeline

Needed data:

* + User name
  + Number of word amendment
  + Timestamp

1. Module5: Number of high order thinking sentences timeline

Needed data:

* + User name
  + Number of high order thinking sentences
  + Timestamp

1. Module6: Number of low order thinking sentences timeline

Needed data:

* + User name
  + Number of low order thinking sentences
  + Timestamp

## Non-functional requirements

Present the background to, and rationale for, requirements for such things as performance, reliability, availability, recovery, confidentiality, security, running costs.

1. The system should present the real time data of mediawiki. If the data in mediawiki database has been changed, the system should reflect it to the wikiglass database in less than 1 minute.