**KWIC Search Engine**

**Team LPNX**

**SE 6362.001**

**Preliminary Project Management Plan**

**Team Lead (Rotated):**

Team lead will be rotated by week.

**Team Members:**

Xinhe Chen (xxc170630)

Keith Nguyen (kxn161730)

YuWei Pai (yxp170730)

Hengbo Liu (hxl170010)

**Team Website:**

<https://github.com/khoanguyen0791/webIndexingEngine>

**Table of Content**

[**1. Introduction**](#_oxdpzx4cvojx) **3**

[1.1 Project overview](#_y0yy6ryk7ff4) 3

[1.2 Project deliverables](#_96rm4yi6zkqk) 3

[1.3 Evolution of this document](#_1l8svhf5tqtf) 3

[1.4 References](#_6n2jzqbfyu2a) 4

[1.5 Definitions, acronyms, and abbreviations](#_4j6l7j4rl46d) 4

[**2. Project organization**](#_pl7eywyq5lw) **4**

[2.1 Process model](#_70rsp6s53vk) 4

[2.2 Organizational structure](#_8zfkn7j2qtci) 4

[2.3 Project responsibilities](#_ms2hf3mvmi7a) 4

[**3. Managerial process**](#_gsjpzb8fg8mr) **5**

[3.1 Assumptions, dependencies, and constraints](#_ad1bafw01pz3) 5

[**4. Technical process**](#_g8d8t8p5a8r) **5**

[4.1 Methods, tools, and techniques](#_27aikoidfp7p) 5

[**5. Work elements, schedule**](#_87r0fra2jv8i) **6**

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# 1. Introduction

### 1.1 Project overview

This project aims to architect a Key Word In Context system and implement it in a website or a user interface. This KWIC system will later be used in a search engine. The process shall include the functional requirements and the non-functional requirements listed in the project requirements provided by Dr. Chung.

### 1.2 Project deliverables

The deliverables shall be available online and in hard copies. The deliverables shall include:

Requirement specification: the SRS document shall describe where the input and output go, and show the functional requirements and non-functional requirements.

Architectural specification: describe the system in both pictures and text, including the advantages and disadvantages of the system. Describe all constraints and patterns and explain why one choice was chosen over the other, and provide traceability between the requirements and the choices.

Specification of the program: documentation and specification of the program, including the language and the environment required to run it, and installation guides.

User Manual: this document shall describe the program and be a guide on how to use the program.

### 1.3 Evolution of this document

|  |  |
| --- | --- |
| Date | Changes |
| 8/27/2018 | Initial writing of this document. We divided the work. |
| 8/30/2018 | Final revision before submitting. |

### 1.4 References

MAXQDA - The Art of Data Analysis. (2018). *Keyword in Context (KWIC) - MAXQDA - The Art of Data Analysis*. [online] Available at: https://www.maxqda.com/help-max18/lexical-search/keyword-in-context-kwic [Accessed 28 Aug. 2018].

### 1.5 Definitions, acronyms, and abbreviations

KWIC - Key Word In Context is the most common form of concordance lines. A KWIC system performs sorting and aligning of words within an article to allow words to be searchable in the index. KWIC is a useful tool for technical manuals.

# 2. Project organization

Process model and team organization are elaborated in this section.

### 2.1 Process model

Agile process model is adopted. Through Iterative (incremental and evolutionary), Communication (Efficient and face-to-face communication), Life cycle (Very short feedback loop and adaptation cycle), Quality focus domain.

### 2.2 Organizational structure

The team LPNX is composed of four members: Xinhe Chen, Keith Nguyen, YuWei Pai, and Hengbo Liu. The leader of our team is going to be rotated from one member to another. The role of leader will supervise activities of the team, and will decide if the member have accomplished the work as they are supposed to.

### 2.3 Project responsibilities

Besides transient responsibilities (such as team leader), fixed responsibilities have been discussed for temporary. For example, revising final deliverables is responsibility of Keith and YuWei, the team website should be maintained by Hengbo (also its database and all other online issues regarding the team website), and tests on the final implementation is assigned to Xinhe. Finally, design and implementation activities are accomplished by all the team member equally.

# 3. Managerial process

### 3.1 Assumptions, dependencies, and constraints

The UTD server will be used to host the KWIC software system for the first phase and the Cyberminer web search engine in the second phase. In the first phase, the system will not be connected to a database. The KWIC software system will take in a line of words, and output an alphabetized list of all the circular shifts of the line of words. Everything will be performed in main memory.In the second phase, the KWIC system will be used to implement the Search Engine and maintain a database of URLs.

# 4. Technical process

### 4.1 Methods, tools, and techniques

The table below lists the tools that will be used in the development cycle of the KWIC Search Engine

|  |  |
| --- | --- |
| **Tools** | **Purpose** |
| Java | Develop the KWIC engine and search engine |
| HTML/CSS | Front-end development of the webpage |
| PHP | Back-end development of webpage |
| Google docs | Collaborate on writing the reports |
| Git | Version control and repository |

# 5. Work elements, schedule

The table below lists the schedule and deadlines of the KWIC Search Engine

|  |  |
| --- | --- |
| Date | Schedule |
| 8/30/18 | Preliminary Project Plan |
| 9/27/18 | Interim Project Phase I Submission and Presentation |
| 10/9/18 | Project Phase I Deliverables due |
| 11/8/18 | Interim Project Phase II Submission and Presentation |
| 11/27/18 | Project Phase II Deliverables due |