Final Preliminary Project Plan
Phase 2
CS 4376.0U1
Team 1
Team URL: https://cs-4376-cyberminer.herokuapp.com/
Rotating Leader: Areebah Fatima

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Meetings:
1. Saturday June 10th @1:00 PM, ECSW Lobby & Remote (**All team members** created diagrams and discussed implementation details) (**Agenda:** Go over implementation details to clear up confusion among members, discuss major components of the system, draw rough drafts of diagrams) (**Summary:** Ilhaam responsible for use case diagrams, Tyler & Areebah & Nathan responsible for class diagrams & sequence diagrams)
2. Wednesday June 14 @ 6:30 PM, Remote (discord) (**All team members** did a dry run of our presentation and assigned slides to one another to present) (**Agenda:** aim to keep presentation under 15 minutes, decided which elements of our presentation require extra explanation) (**Summary:** Mathew responsible for slide 1 and 2 (demo), Nathan responsible for slide 3 and 4, Areebah responsible for slide 5, Tyler responsible for slide 6 and 7, Ilhaam responsible for use case diagram and template. Darrien will be our timekeeper.

1. Introduction

1.1 Project overview

The following document will describe the planning, scheduling, and team organization involved in implementing the Comet Crawler web search engine. The project's end goal is to create a system

that will provide users with relevant information using the keywords entered by the user. The resulting data provided to the end user will be a sorted and filtered list of web page URLs.

The major components of the search engine will include a search interface, indexing system, result filtering, query processing, etc. The search interface will allow the end user to interact with the system, enter search queries, and retrieve information. The indexing system will organize, store, and rank information to allow for a reasonably fast search. Result filtering will ensure that our system provides users with relevant, up-to-date data in sorted order. Finally, the query processing component of the project will be responsible for interpreting user inputs, identifying keywords in said input, performing index lookup, and retrieving results.

1.2 Project deliverables

A)	Preliminary Project Plan	06/01/2023
B)	Interim Project	06/15/2023
C)	Final Project I Submission	06/29/2023
D)	Interim Project II	07/13/2023
E)	Final Project II Submission	08/01/2023

1.3 Evolution of this document

Revision History

Who	When	Changes
Tyler Hargreaves	May 29th	Started document
Areebah Fatima	May 30th	Began Preliminary Documentation; Wrote project description, deliverables, etc.
Nathan Heindl	May 30th	Wrote project responsibilities and management priorities
Tyler Hargreaves	June 11th	Updated to reflect recent decisions and architecture changes

1.4 References

I.	Team Source Code Website	https://github.com/tyharg/CS-4376
II.	Team Demo Website	https://cs-4376-cyberminer.herokuapp.com/
III.	Course Homepage	https://personal.utdallas.edu/~chung/OOD/syllabus.htm
IV.	Getting Started with Rails	https://guides.rubyonrails.org/getting_started.html

Cited References

[1]   Booch, G., Rumbaugh, J., & Jacobson, I. (1999). *The Unified Modeling Language User Guide*. Addison-Wesley.

1.5 Definitions, acronyms, and abbreviations

UML: Unified Modeling Language
CI/CD: Continuous Integration / Continuous Delivery

2. Project organization

2.1 Process model

2.2 Organizational structure

Team Members: Tyler Hargreaves, Darrien Kramer, Ilhaam Syed, Nathan Heindl, Areebah Fatima, Matthew Bedford

Deliverable	Team Leader
Preliminary Project Plan	Tyler Hargreaves
Interim Project	Darrien Kramer
Final Project I Submission	Ilhaam Syed
Interim Project II	Nathan Heindl
Final Project II Submission	Areebah Fatima
Project Phase I and II Presentation	Matthew Bedford

2.3 Organizational boundaries and interfaces

2.4 Project responsibilities

Every member will be involved in both of the project's main two life cycles. Team leaders are specifically to turn in work, keep workflow on track, and organize meetings. For more specific responsibilities they will be discussed at a later date.

3. Managerial process

3.1 Management objectives and priorities

The team leaders are to help manage meetings, turn in deliverables, and keep everyone up to date on the project's progression. If subgroups are used then it's the team leader's responsibility to make sure both teams have what they need to complete their work.

3.2 Assumptions, dependencies, and constraints

Because we are implementing a long-term-support version of Ruby on Rails, we will be operating under the presumption that HTTP dispatching, database access, and other core functionality is handled appropriately. This design philosophy allows us to concern ourselves with engineering the search algorithm and other important application-specific features.

The application is dependent on Rails and its own dependencies. A full list of requirements can be found at: https://github.com/tyharg/CS-4376/blob/main/Gemfile.

3.3 Risk management

The project will be hosted on Heroku and will implement a basic CI/CD pipeline to ensure that deployed code will have a high probability of accuracy.

3.4 Monitoring and controlling mechanism

4. Technical process

4.1 Methods, tools, and techniques

The Creately workspace will be the modeling tool our team will use to create our Use Case, Class, and Sequence Diagrams. The programming language our team has agreed to for the project is Ruby, and we will be utilizing the Rails framework to handle HTTP requests and database access. We will additionally be using various packages such as Pry and AppMap to analyze our program and create diagrams.

Our team will use the following tools to communicate: the Discord social platform, Google Docs, and Microsoft Teams. In addition to these communication tools, our team will host in-person meetings when needed.

4.2 Software documentation

The application aims to utilize automatically generated documentation wherever possible. This is done to avoid the Achilles heel of outdated documentation.
- Main readme: https://github.com/tyharg/CS-4376/tree/main
- User manual: Click Here to View

4.3 Project support functions

- Rails testing infrastructure: https://guides.rubyonrails.org/testing.html

5. Work elements, schedule, and budget

This project is scheduled to be completed by August 1st, 2023. Listed below is the project deliverable due date.

Deliverable	Due By
Preliminary Project	June 1, 2023
Interim Project I	June 15, 2023
Final Project I Submission	June 29, 2023
Interim project II	July 13, 2023
Final Project II Submission	August 1, 2023