Conestoga Provincial Park Online Reservation System

Team member:
Bin Hu

Responsibility:
Teamlead,
Project owner,
Full-stack Dev,
Client communication,
Github Management

Conestoga Provincial Park Online Reservation System

Team member:
Chia-Hua Chang

Responsibility:
Project cloud deployment,
Front-end design and dev,
Meeting munites and documentation,
Jira management,
Scrum master

Conestoga Provincial Park Online Reservation System

Team member:
Zhiqun Xie

Responsibility:
Full-stack Dev,
Powerpoint，
Support

Conestoga Provincial Park Online Reservation System

Client company:
Conestoga Provincial Park

P.I.C : Mr. Thomas Hanks
Position: CEO

TO BE CONTINUED.
    - subject to change

To add in future updates:
    - biz purpose
    - teck stack
    - system design diagrams

Thank you!

Connect Life and Learning

This Letter of Understanding is entered into as of the Signing Date between the STUDENT(S) and the COMPANY for the purpose to describe the student project.

WHEREAS the STUDENT(S), enrolled at Conestoga College Institute of Technology and Advanced Learning (herein "Conestoga"), has (have) been asked to develop, design, and/or produce a prototype product or process for the COMPANY in the pursuit of either his/her/their academic requirements within a final year, capstone, or class project, or other project outside of academic pursuits (herein referred to as "PROJECT");

AND WHEREAS the COMPANY has agreed to accept the quality and quantity of the STUDENT's work in the pursuit of his/her/their academic requirement as presented in the final deliverable for the PROJECT and to accept the full responsibility and full risk of implementing the final deliverable into the COMPANY, the parties agree upon the following scope and schedule.

PROJECT DEFINITION	
Title	Online reservation web application for Conestoga Provincial Park
Description (< 300 words)	This website is designed for hikers to make reservation online when they want to go hiking in Conestoga Provincial Park. It makes it easier for the hikers to plan their trip, pay incurred fees, get relevant notifications, and also easier for the staff to manage the park. By restricting the number of hiker to fit the capacity of the campsite would help maintain the park area and support the sustainability of the nature environment.
Short Description for Conestoga Website (< 150 words)	This website is designed for hikers to make reservation online when they want to go hiking in Conestoga Provincial Park.
Deliverables	1. mentioned website with various functions (please refer to the project plan.) 2. High level class diagram design. 3. Use case diagram. 4. Database system design diagram.
Start Date	May 24, 2024
End Date	Aug 9,2024
Estimated amount of work (in hours)	150
Budget Proposal	
Intellectual Property	As per NDA agreement.
Company In-Kind Contribution	

Having read and understood this Agreement, the STUDENT(S) and the COMPANY accept the above terms and conditions as of the Signed Date.

Student 1		COMPANY	
SIGNATURE:	*Hu Bin*	SIGNATURE:	*Thomas Hanks*
SIGNING DATE:	May 24, 2024	SIGNING DATE:	**MAY 24, 2024**
NAME (PRINTED):	Bin Hu	NAME (PRINTED):	**THOMAS HANKS**
EMAIL:	Bhu4011@conestogac.on.ca	TITLE:	**CHIEF EXECUTIVE OFFICER**
			I have authority to bind the COMPANY.

Student 2			
SIGNATURE:	*Chia-Hua Chang*	NAME OF COMPANY:	**CONESTOGA PROVINCIAL PARK**
SIGNING DATE:	May 24, 2024	ADDRESS:	**110 COLUMBIA FOREST BLVD, WATERLOO, ON**
NAME (PRINTED):	Chia-Hua Chang	TEL:	**548-577-6060**
EMAIL:	Cchang8189@conestogac.on.ca	FAX:	**548-577-1234**
		EMAIL:	**THOMASH@GMAIL.COM**

Student 3	
SIGNATURE:	*Zhiqun Xie*
SIGNING DATE:	May 24, 2024
NAME (PRINTED):	Zhiqun
EMAIL:	Zxie5726@conestogac.on.ca

Student 4		Witness	
SIGNATURE:		SIGNATURE:	*SHAOWEN HE*
SIGNING DATE:		SIGNING DATE:	**MAY 24, 2024**
NAME (PRINTED):		NAME (PRINTED):	**SHAOWEN HE**
EMAIL:			

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CONESTOGA
Connect Life and Learning

This Agreement is entered into as of the Signing Date between the STUDENT and the COMPANY for the purpose of protecting the confidentiality and intellectual property of the interested parties.

WHEREAS the STUDENT, enrolled at Conestoga College Institute of Technology and Advanced Learning (herein "CONESTOGA"), has been asked to develop, design, and/or produce a prototype product or process for the COMPANY in the pursuit of either his/her academic requirements within a final year, capstone, or class project, or other project outside of academic pursuits (herein referred to as "PROJECT");

AND WHEREAS the COMPANY has agreed to accept the quality and quantity of the STUDENT's work in the pursuit of his/her academic requirement as presented in the final deliverable for the PROJECT and to accept the full responsibility and full risk of implementing the final deliverable into the COMPANY.

The STUDENT and the COMPANY agree to the following on confidentiality for the PROJECT:

1. **Description of Confidential Information.** The Confidential Information to be disclosed under this Agreement is described as follows and includes those materials specifically identified as:
    i.   material which is marked as confidential at the time of disclosure; or
    ii. material in oral or visual form identified as confidential at the time of disclosure and subsequently designated as such within a written memorandum sent to the STUDENT within thirty (30) days following the original disclosure.

2. **Purpose of Recipient's Use of Confidential Information.** The STUDENT shall make use of the Confidential Information only for the following purpose of the PROJECT.

3. **Confidentiality Period.** This Agreement and the STUDENT's duty to hold Confidential Information in confidence expire eighteen (18) months after the Signing Date. STUDENT must abide by the ownership of intellectual property from the COMPANY or third parties. This Agreement shall be enforced should the STUDENT cease to be part of the PROJECT.

4. **Non-Disclosure.** The STUDENT agrees that he/she will retain the Confidential Information in confidence and that he/she will not disclose such Confidential Information to any third party or use the Confidential Information for any purpose other than the PROJECT. The STUDENT shall use at least the same standard of care in protecting the confidentiality of the Confidential Information that he/she uses in protecting his/her own Confidential Information of a similar nature but, in any event, no less than a reasonable standard of care. The STUDENT may disclose the Confidential Information only to other students (working on the PROJECT) and faculty members who oversee his/her work who have a need-to-know the Confidential Information for the PROJECT, and who are bound by substantially the same obligations as the STUDENT pursuant to this Agreement.

5. **Return of Confidential Information.** Upon the written request of the COMPANY, the STUDENT shall return all Confidential Information and copies thereof in his/her possession or under his/her control to the COMPANY, subject to the right of the STUDENT to retain one (1) full archival copy of such Confidential Information for the purposes of establishing the extent of the disclosure of such Confidential Information. Such Confidential Information shall nonetheless be subject to the confidential period pursuant to Section 3.

The STUDENT and the COMPANY further agree to the following for intellectual property for the PROJECT:

1. **Definition of Intellectual Property:** *Intellectual Property* includes (for the purpose of this Agreement) technical information, knowhow, inventions, models, patents, drawings, designs, specifications, prototypes, computer software (source and object code), and other creations that can be protected under patent, copyright, or trademark laws.

2. **Ownership of Intellectual Property:** The resulting intellectual property developed by the STUDENT for the purpose of the PROJECT as a completed deliverable for the PROJECT will be owned by the COMPANY. Any background intellectual property remains the property of the owner of the intellectual property. The use of any background intellectual property needs to be mutually agreed to in writing by the STUDENT and COMPANY.

3. **Academic Requirements:** Since the PROJECT work may contribute to the STUDENT's academic requirements, the final presentation of the Project shall not be subject to publication restrictions by the COMPANY. The COMPANY may request reasonable delays in the publication and/or presentation by the STUDENT of any intellectual property to which the COMPANY has ownership rights in order to allow the COMPANY to protect their rights in such intellectual property. CONESTOGA will work with the COMPANY and the STUDENT to permit reasonable delays or to limit any information disclosure to the minimum required for the academic assessment of the PROJECT as determined by CONESTOGA at its sole discretion. No delays, under any circumstance, will be approved that would negatively affect the academic progress or career of the STUDENT.

Having read and understood this Agreement, the STUDENT and the COMPANY accept the above terms and conditions as of the Signed Date.

STUDENT		COMPANY	
SIGNATURE:	*Chia-Hua Chang Hu Bin Zhiqun Xie*	**SIGNATURE:**	*Thomas Hanks*
SIGNING DATE:	May 23, 2024	**SIGNING DATE:**	May 23, 2024
NAME (PRINTED):	Bin Hu, Chiahua Chang, Zhiqun Xie	**NAME (PRINTED):**	Thomas Hanks
EMAIL:	Zxie5726@conestogac.on.ca	**TITLE:**	Chief Executive Officer
			I have authority to bind the COMPANY.

Witness	*(for Student)*		
SIGNATURE:	SHAOWEN HE	**NAME OF COMPANY:**	Conestoga Provincial Park
SIGNING DATE:	May 23, 2024	**ADDRESS:**	110 Columbia Forest blvd, Waterloo, On
NAME (PRINTED):	Shaowen He	**TEL:**	548-577-6060
		FAX:	548-577-1234
		EMAIL:	thomash@gmail.com

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Client Expectations: Conestoga Provincial Park Sustainability 2024

Dear Project Client:

Thank you for participating as a client in our student projects. I hope the experience will be as enjoyable and rewarding for you as it is for the students. This letter addresses some frequently asked questions regarding the project. I hope it will clarify your role and expectations and minimize any potential misunderstandings.

Q: What is the Systems Project?

A: The Systems Project is a mandatory component of the CAD programs within the School of Applied Computer Science and Information Technology. The project involves a group of three students. Each student is required to collaborate within a group to develop a functional web application that fulfills their client's requirements.

Q: What fees are charged?

A: There is no fee charged for the work completed as part of the Systems Project course requirement.

Q: What expectations should I have as a client?

A: You should anticipate spending some time with the students throughout the project to help them develop the specifications, as you are the business expert. The completed project should be considered a prototype system. Additionally, one of the student group's responsibilities is to manage the project's scope to ensure the application can be completed within the term. This may result in a system that does not meet all of your needs.

Q: What are the project deliverables to the client?

A: You will receive a fully functional copy of the system, including source code, database, executable code, and documentation. This will enable you to maintain the system in the future, even if the original students are no longer available.

Q: Who owns the application system that is developed by the students?

A: The college acknowledges that students may create intellectual property as a natural outcome of the educational process. The college's role is to provide an educational environment that supports student learning. Students retain the copyright to the materials they produce. Generally, the college does not claim ownership of any intellectual properties created by students unless the student was compensated as an employee for the creation of the work or if the creation required extensive use of college resources.

Conestoga College is not liable for any intellectual property or copyright matters related to these projects. Should a legally binding agreement be required, the Office of Research should be involved. Please note that projects requiring such agreements may not be suitable for student projects and may be referred to the Office of Research for potential future partnership.

Q: **Can I expect to implement the system in my business environment?**

A: We expect the students to grant a restricted license to the client, allowing them to establish a copy of any required database and as many copies of the system as needed to access this single database over a network (for a multi-user system). If the client wishes to make additional installations in other offices or include the system as part of a saleable product, a fair arrangement should be made with the student group for these additional licenses.

Q: **What if I want to continue development of the system after the end of term?**
A: Since this work will occur after the course requirement period ends (i.e., in May or June), it is not covered under the Systems Project. Throughout the project, we hope you will establish a good working relationship with one or more members of your student team. At this point, you may wish to continue development on a fee-for-service or other contractual basis with the original students or with your own staff.

I hope this letter addresses some of the questions you may have had with respect to acting as a client for our students. If you have any further questions or concerns, please do not hesitate to email coordinator: Liz Stacey lstacey@conestogac.on.ca or Randall Kozak rkozak@conestogac.on.ca,

Clients, by participating in this activity, the client confirms they have read this document, and accept all risks and conditions related to the proposed student project.

Signature: _Thomas _____   Date: _____25 May 2024_____

Students Please upload onto dropbox under Name of Project.

Thank you for Supporting our students in the School of Applied Computer Science and IT.

Jim Edwards
Chair, School of Applied Computer Science and Information Technology
Conestoga College ITAL
jedwards@conestogac.on.ca

(519) 885-0300 ext. 5285

Project Charter

Team Number: 11

Team Member Names: Chia-Hua Chang; Bin Hu; Zhiqun, Xie;

Team Name: Group 11

Date: 25 May 2024

The project charter represents the first blueprint of the system. It is a statement of intent by your client of their desire to develop a software solution.

Business Purpose

The purpose of this project is to develop a web application for Conestoga Provincial Park to promote sustainability of its three trails. The application will enable backpackers to input information and make campsite reservations, ensuring that outdoor resources are not overused and remain preserved for future generations. This initiative aims to balance recreational use with environmental conservation.

Project Roles/Responsibilities

These represent the roles and names of each member of the team and the responsibilities that each has. Include users who will assist with the project.

Team Member Name	Project Role	Responsibilities
Chia-Hua, Chang	Scrum Master; Web Page Designer; Front-End Developer;	- Help the team maintain their burndown chart and other project management tools to ensure a smooth workflow. - Design the layout, color scheme, and graphical elements of the website. - Develop the client-side logic and user interfaces for the web application.
Bin Hu	Project Owner Full Stack Developer(mainly BE); Database&SQL Developer;	- Define the project vision and ensure that it aligns with business goals. - Make decisions regarding the project's requirements and scope. - Develop server-side logic and database integration. Manage API integration and business logic.
Zhiqun Xie	Full Stack Developer(mainly BE); Tester;	- Develop server-side logic and database integration. Manage API integration and business logic. - Develop and execute test plans to ensure the application is functional,

		reliable, and meets the quality standards.

Feature List

1.Shows the weather forcast

2.Shows the campsite information for the specific trail, including facility information like water/electricity/shlter/convience store…etc

3.Shows the gallery of camping location to users

4.Allow users to make reservations for him/herself or his/her group

5.Allow users to cancel reservations

6.Allow users to check the status of their reservations

7.Allow users to update their reservations

8.Shows the remaining available reservations for campsite and parkinglot

System Objectives

1."Ensure that the web application is intuitive and straightforward, allowing users to complete their reservations and data entries within four clicks."

2."Maintain data integrity with basic security measures to protect user input and prevent data loss."

3."Design the application to be compatible with both desktop and mobile platforms, ensuring accessibility for all users."

Project Critical Success Factors

1. User-friendly design that enables backpackers to easily navigate the app for information input and campsite reservations.

2. Robust system architecture that can handle high traffic and data input without compromising performance, especially during peak visitor seasons.

3. Effective integration of real-time data analytics to monitor trail usage and campsite occupancy, allowing for immediate response to preserve the park's resources.

4. Strong community engagement strategies that encourage user feedback and participation in sustainability efforts, fostering a sense of ownership and responsibility among park visitors.

Preliminary Technical Architecture

Front-End: JavaScript, HTML, CSS, AJAX/Axios

Back-End: Node.JS, Express.JS

DataBase: MySQL

Cloud Server: Azure Cloud, Linux(CentOS)

Other Development Tools: Git(Version Control), Jira(Project Management), Maven(Dependencies Importation)

Event Table

Event	Trigger	Source	Use Case #	Use Case	Response	Destination
Backpacker wants to check weather forcast in the provincial park.	*Weather Podcast Inquiry*	*Backpacker*	*UC01*	*Shows the weather forcast*	*Weather forcast for future 7 days displays*	*Backpacker*
Backpacker wants to check campsite information for each trails.	*Campsite Queries*	*Backpacker*	*UC02*	*Shows the campsite information for the specific trail*	*Campsite Information details will display, , including facility information like water/electricity/shlter/convience store…etc*	*Backpacker*
Backpacker wants to look for images for certain campsite.	*View the images of the campsite.*	*Backpacker*	*UC03*	*Shows the gallery of camping location to users*	*The gallery of chosen campsite displays.*	*Backpacker*
Backpacker want to book a campsite for their group.	*Campsite Reservation.*	*Backpacker*	*UC04*	*Allow users to make reservations for him/herself or his/her group*	*The application provides a campsite reservation form page for users booking and send the user booking status after submission.*	*Backpacker*
Backpacker want to cancel a existing campsite reservation for their group.	*Campsite Reservation Cancellation.*	*Backpacker*	*UC05*	*Allow users to cancel reservations*	*The application provides a campsite cancellation page for users cancelling their plan and send the user cancellation status after submission.*	*Backpacker*
Backpacker want to check a existing campsite reservation for their group.	*Campsite Reservation Inquiry*	*Backpacker*	*UC06*	*Allow users to check the status of their reservations*	*The application provides a reservation information page for users reviewing their plan.*	*Backpacker*

Backpacker want to update a existing campsite reservation for their group, e.g. modify the start and end date, or modify the teammates info, etc.	Campsite Modification Inquiry	Backpacker	UC07	Allow users to update their reservations	The application provides a reservation modification page for users changing their plan.	Backpacker
Backpacker want to learn about the campsite and parking lot availability.	campsite and parking lot availability inquiry	Backpacker	UC08	Shows the remaining available reservations for campsite and parkinglot.	The application provides a parking lot and campsite availability page for users changing their plan.	Backpacker

Reference

Satzinger, J., Jackson, R., Burd, S.D. (2008). Systems Analysis and Design in a Changing World (5th ed.). Course Technology. p. 169.

Team Charter

Team Name

Team Name: Group 11

Team Logo

Team Members

Team Member Names	Contact Information
Chia-Hua, Chang	+1 (548) 577-6306
Bin Hu	+1 (437) 669-8875
Zhiqun Xie	+1 (437) 766-1611

Member Roles

List the team member(s) who will work on each aspect of the project in the table below:

Project Management	
Team leadership	Chia-Hua, Chang
Project planning	Bin Hu
Project record-keeping	Chia-Hua, Chang ; Bin Hu; Zhiqun Xie
Analysis, Design and Documentation	
Interacting with clients	Bin Hu
Diagramming and documenting client requirements	Chia-Hua, Chang
Diagramming and documenting overall design	Bin Hu
Technical documentation	Zhiqun Xie
Client documentation	Bin Hu
Web Development	
Creating web graphics	Chia-Hua, Chang

Web site design	Chia-Hua, Chang
Web page design	Chia-Hua, Chang
Web programming	Chia-Hua, Chang
Interactive testing	Chia-Hua, Chang
Business Layer Development	
Class design	Bin Hu; Zhiqun Xie
Business programming	Bin Hu; Zhiqun Xie
Technical / lower-level programming	Zhiqun Xie
Unit and integration testing	Zhiqun Xie
Database Development	
Database design	Bin Hu
SQL/LINQ Development	Bin Hu
Other	
Report development	
Installer development	

Expectations

1. "Each team member is expected to contribute equally to the workload, ensuring a fair distribution of tasks and responsibilities."

2. "All team members must attend scheduled meetings unless excused in advance, to maintain communication and project continuity."

3. "Deliverables must be completed on or before the due dates established in the project timeline to ensure timely progress throughout the project."

4. "Team members should communicate openly and respectfully, providing constructive feedback and supporting a positive work environment."

5. "Conflicts within the team must be resolved quickly and constructively, involving a mediator if necessary, to maintain team harmony and focus."

6. "Each member is expected to maintain a high standard of quality in all work submitted, aligning with the project's objectives and requirements."

7. "Members should proactively seek assistance or clarification when needed to ensure that tasks are completed accurately and efficiently."

8. "All team members should demonstrate accountability for their actions and decisions related to the project to foster trust and dependability among the group."

Consequences

1. **Initial Feedback and Discussion:** When expectations are not met, the first step will be a private discussion between the involved team members and the team leader to identify the issue and seek a resolution.

2. **Reassignment of Tasks:** If improvement is not seen, tasks may be reassigned to ensure the project's success, while the underperforming member may be given tasks that better suit their current skills.

3. **Documentation of Proceedings:** All steps taken, discussions held, and decisions made in response to the failure to meet expectations will be documented for transparency and future reference.

Agreement

Each team member *must* sign the charter. The Team Charter can be revised at any time during the project with the consent of **all** team members.

Signature

Hu Bin _Zhiqun Xie_ _Chia-Hua Chang_

Date:

_____25 MAY 2024_____

Project Plan

Team Number: 11

Team Member Names: Chia-Hua, Chang; Bin Hu; Zhiqun, Xie;

Team Name: Group 11

Date: 25 May 2024

Project Goal

Develop a website that can help provincial parks maintain their hiking trails by providing a reservation system for backpackers to preserve the quality of trails and natural resources. In addition, the application can be replicated for other provincial parks that gain additional revenue.

Success metrics

1. Load time:
   Time to first byte(TTFB) of each page <2 sec.
2. User Satisfaction:
   Meets the requirements of clients.
3. Lead Time for Changes:
   From code commit to production < 20 minutes.

Stakeholders and roles

1. Provincial Park Administrators (Client)
   Role: Users of the system who manage trail and campsite reservations. Provide requirements and feedback on the system's functionality.
2. Backpackers
   Role: Users of the system who would like to go hiking and make campsite reservations through the system.
3. Development team
   Role: Group 11 team members who are responsible for developing this website.

Scope and budget

1. Scope:
   This application will be developed as a website only.
   Will not deliver a mobile application or desktop application.
2. Budget:
   Cost: 100K CAD
   Project duration: 5/14/2024~8/9/2024

Milestones and deliverables:

1. Project Initiation and Planning
   Deliverables:
   a. Team charter
   b. Project charter
   c. IP contract
   d. Project Plan
   e. Web search and rationale report
   f. Client sign-off document
   g. Draft presentation slides
   h. Meeting minutes

2. Iteration 1 - Design
   Deliverables:
   a. Iteration 1 plan
   b. Use Case Diagram(s)
   c. Use Case Description(s)
   d. Design Level Sequence Diagram(s)
   e. Navigation Diagram(s)
   f. User Interface Prototype(s)
   g. Output Design
   h. Meeting minutes

3. Iteration 2 - Development
   Deliverables:
   a. Iteration 2 plan
   b. Design Class Diagram(s)
   c. Entity Relationship Diagram(s) (ERD)
   d. The first version of the Frontend code
   e. The first version of the Backend code
   f. Meeting minutes

4. Iteration 3 - Deploy & QA Test
   Deliverables:
   a. Iteration 3 plan
   b. Unit Test Plan and Results
   c. Verified frontend code
   d. Verified backend code
   e. Meeting minutes

5. Transition

Deliverables:

    a. Deployment Guide

    b. User Technical Manual

    c. Client sign-off document

    d. Meeting minutes

6. Presentation

Deliverables:

    a. Introduction slides

    b. Recorded presentation

    c. Brochure

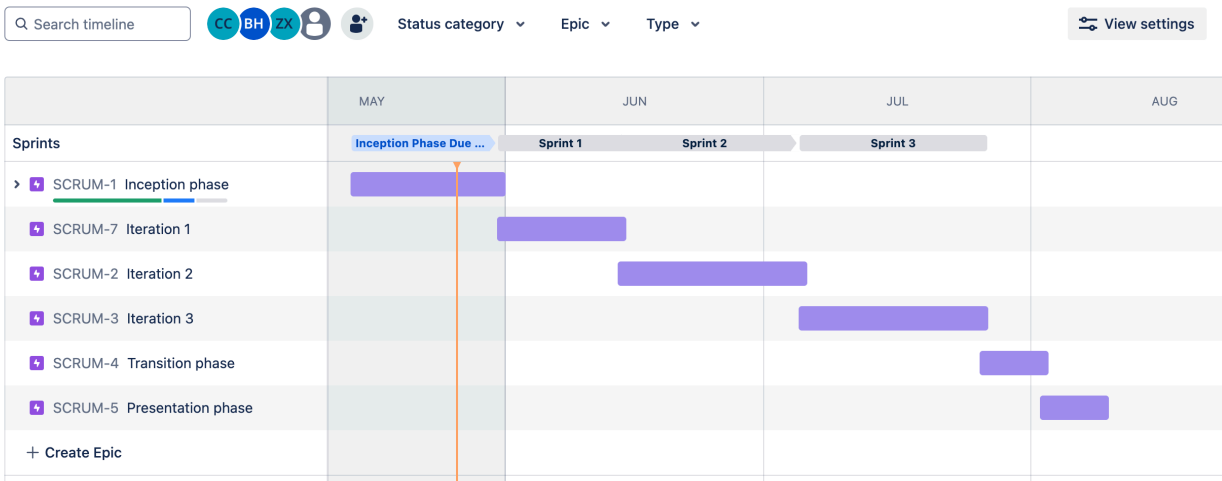   d. Resume and business cards

    e. Meeting minutes

Timeline and schedule

1. Project Initiation and Planning, 5/14/2024 ~ 5/31/2024
2. Iteration 1 – Design, 5/31/2024 ~ 6/14/2024
3. Iteration 2 – Development, 6/14/2024 ~ 7/5/2024
4. Iteration 3 – Deploy & QA Test, 7/5/2024 ~ 7/26/2024
5. Transition, 7/26/2024 ~ 8/2/2024
6. Presentation, 8/2/2024 ~ 8/9/2024

Communication Plan

Stakeholder	Information	Communications	Frequency
Client	Status Update/Feedback	Face-to-face/Zoom	Weekly
Team	Issue tracking, status update	Face-to-face/Zoom/GitHub/WeChat	Weekly

Competitor Analysis Report for Conestoga Provincial Park Online Reservation Web App

Introduction:

This report evaluates the competitive landscape for online reservation systems focusing on sustainability in Ontario's provincial parks, with an emphasis on Conestoga Provincial Park.

Research Methodology:

Our analysis is based on a combination of desktop research, user reviews, and feature comparisons to understand the strengths and weaknesses of existing systems.

Competitor Identification:

1. EcoReserveApp (https://www.ecoreserve.org/) , a web-based platform used by several parks across Eastern Ontario for campsite reservations and trail management.

Analysis:

1. EcoReserveApp:

- Strengths: EcoReserveApp boasts an intuitive user interface and robust data handling capabilities.

- Weaknesses: it lacks features specifically tailored for sustainability measures, such as impact reporting and resource usage analytics.

Market Gap Analysis:

There is a noticeable gap in the market for a reservation system that not only manages bookings but also integrates advanced sustainability analytics to monitor and minimize ecological impact.

Rationale:

The competitor was chosen for its emphasis on campsite management within Ontario's provincial parks. By evaluating its features related to sustainability and park visitor management, we can refine our app's development and positioning. This insight will allow us to tailor our solution to better meet the specific sustainability goals and operational needs of Conestoga Provincial Park, thereby offering a distinctive and more focused service within the provincial park management ecosystem.

Recommendations:

1. Incorporate real-time sustainability analytics to track and report on resource usage and visitor impact.

2. Develop a feature that allows users to participate in sustainability initiatives directly through the app.

3. Introduce educational content about the park's ecosystems and conservation efforts to foster visitor awareness and engagement.

4. Ensure the app's scalability to potentially expand services to other provincial parks in Ontario.