CSC 190 Section 01

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03/19/2014

Charter

Behaving

Senior Design Project

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1. INTRODUCTION

This is the Project Charter document for the GotTrackDays.com project sponsored by the proprietor of Got Track Days Incorporated (Inc.), Juan Calderon.

This project is being undertaken by the jBehaving development team. The team is comprised of undergraduate students majoring in Computer Science at California State University, Sacramento. The team members are enrolled in a two-semester senior project course required of all undergraduate majors. Successful delivery of the desired software product will fulfill the senior project requirement for the student team members.

The introduction section will go over the purpose and scope of the project charter. It will contain a list of definitions, abbreviations, and acronyms used throughout the document and references used to create it by the jBehaving team. The last section will have an overview of the contents of the document.

PROJECT SPONSOR:

Name: Juan Calderon
Title: Proprietor
Company Name: Got Track Days Inc.
Contact Information:
Email: juan@GotTrackDays.com
Phone Number: (916)501-7147

JBEHAVING DEVELOPMENT TEAM:

NAME	EMAIL	PHONE NUMBER
Ashley Finger	phyllangela@gmail.com	(408) 623-0062
Bai Xiong	bai.xiong91@gmail.com	(916) 583-4058
Cody Lanier	cody.lanier9@gmail.com	(916) 842-7869
Cody Prior	hiimcodas@gmail.com	(916) 740-0594
Daniel Gallegos	daniel.r.gallegos@gmail.com	(707) 803-1519
Michel Watson	michelwwatson@gmail.com	(916) 596-8253

Table 1 - jBehaving Contact Information

1.1. Purpose

This document is to serve as a clear understanding of what is expected over the course of the development of the GotTrackDays.com website by the jBehaving development team for Got Track Days, Inc. For the members of team jBehaving, this document will have their contact information, and prior experience. For the sponsor, this document will contain information about his background, his business, Got Track Days, Inc., as well as the reason team jBehaving will be developing the website, GotTrackDays.com, for his business. There will be clearly defined ways in which the sponsor and team will communicate and work together to accomplish the goals of this project, as well as a list of what is expected to be accomplished and a list of things that the sponsor would like to be accomplished if time permits.

1.2. Scope

This document will serve as an explanation of the sponsor, their business, and business goals. It also expresses the goals of the GotTrackDays.com website and how it will benefit both the end user and the sponsor. Additionally, the Charter describes jBehaving's expectations regarding management of the project, including the deliverable schedule, organization, and quality assurance practices.

This document does not serve as an explanation of the teams detailed project management plans, which will later be described in the Project Management Plan deliverable. It also does not imply a complete set of agreed upon project requirements. The requirements will further be outlined and discussed in detail in the Software Requirements Specification (SRS).

1.3. Definitions, Acronyms and Abbreviations

This section contains explanations of terms used throughout this document as well as acronyms and abbreviations.

1.3.1. Definitions

WORD	DEFINITION
Agendas Organizer	Cleans up and archives old agendas and create new ones from templates
Class	Template for creating objects
Cloud	Refers to a non-local, offsite storage location, usually managed by a third party
CSc 190	The first semester of the senior project at Sacramento State University
CSc 191	The second semester of the senior project at Sacramento State University
Decision Tracker	Keeps track of and updates the Decision Matrix, as necessary
Deliverable	Document to be turned in to the professor, the advisor, or the sponsor.
Deliverables Printer	Responsible for printing out deliverables on due dates for turn in
Documentalist	Creates new document templates; Ensure formatting and organization continuity
Eclipse	(see Integrated Development Environment)
Facebook	A social networking site
GitHub	Free internet repository for collaborative software development
Google+	Pronounced: Google Plus, A social networking site
Google Drive	Private, public, and/or shared web-based, cloud-storage location used to create and edit documents, spreadsheets, PowerPoint presentations, and more. A Google account is required.
Google Hangout	A free text and video chat/instant messaging program. This is the group's primary means of communication outside of meetings.
Google Wallet	A payment system using debit cards, credit cards, loyalty cards and gift cards

GotTrackDays.com	The website that Got Track Days Inc. will use to allow customers to book tracks
Got Track Days Inc.	A business that allows its customers to book track time on a variety of locations
Integrated Development Environment	Software for use by computer programmers for software development
Java	Class based and object oriented programming language
Minutes Organizer	Cleans up and archives old minutes and create new ones from template
Object Oriented	A way of programming that uses classes and/or object which have attributes and procedures known as methods or functions
PayPal	A business allowing for payments and money transfers
Producteev	A free web-based task management software
Repository	Basically, a grouped storage location for files and data
Sponsor	The business the software will be for. The sponsor will provide wants and needs for the software as well as give approval at the end of each stage.
Sponsor Liaison	Responsible for all communication to sponsor
Stenographer	Project note taker
Time Keeper	Data entry for time cards; Prints and submits a hardcopy every Tuesday
Track Dollar Calculator	A tool that will be on the website, GotTrackDays.com, that will let customers enter their fixed costs for attending an event along with the fees to figure out their actual cost
WBS Keeper	Creates & updates the WBS during the course of the project

Table 1.3.1 - Definitions

1.3.2. Acronyms

ACRONYM	DEFINITION
CSc	Computer Science Course
CSUS	California State University Sacramento
IDE	Integrated Development Environment
SDS	Software Design Specification
SRS	Software Requirements Specification
STR	System Test Report
STS	Software Testing Specification
WBS	Work Breakdown and Baseline Schedule

Table 1.3.2 - Acronyms

1.3.3. Abbreviations

ABBREVIATION	DEFINITION
Inc.	Incorporated
Sr.	Senior

Table 1.3.3 - Abbreviations

1.4. References

- Juan Calderon. "www.GotTrackDays.com." *GotTrackDays.* n.p., 2/26/2014. Web. 2/26/2014. <http://www.GotTrackDays.com/>.
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- "Producteev." Producteev, n.d. Web. 2/28/2014. <www.producteev.com/>.

1.5. Overview of Contents of Document

This subsection briefly describes each of the remaining sections in the document as well as the contents of each appendix.

2. Project Sponsor and Project Need

This section will address identifying the project, the business, the vision, and the need of the sponsor. Furthermore, this section will explore the goals for the team and the success criteria for the project at hand. The purpose for identifying these specific aspects of the project is to demonstrate to the sponsor that jBehaving deeply understands the sponsor's business as well as the sponsor's needs.

3. Management Proposal

This section specifies the management and control of the project development. This includes work schedules of the various deliverables throughout the software development life cycle, estimated costs of completing the project, team organization in terms of roles and responsibilities, quality assurance and a control process where changes are requested or proposed.

4. Conditions and Comments

This section defines the terms and conditions by which team JBehaving will work on the project, and the level of collaboration and coordination required from Got Track Days Inc. This represents general guidelines for the design and implementation of the project. Exact requirements will be elicited and specified in the Software Requirements Specification.

5. Approvals

Approval signatures will be collected from each of the jBehaving team members, as well as from the advisor and the sponsor. These approvals will signify that each person fully understands this document and approves of its overall content.

Appendix A: Project Team Experience

Each team member generally describes their academic and professional backgrounds in relation to the Computer Science field. This information can be helpful in assessing potential strengths and weaknesses, which can then be used to identify potential assignments for each phase in the project.

Appendix B: Partnership Requirements Between the Team and Sponsor

The sponsor and the team should review the items in this appendix, which describe the relationships and requirements between both entities. In so doing, both parties should reach an understanding regarding the shared responsibility that is the project at hand.

Appendix C: Phases of Work for both CSC 190 and CSC 191

This appendix identifies the phases of work in both CSc 190 and CSc 191, the deliverables associated with each phase, and the approval requirements.

Appendix D: Estimated Labor Costs Breakdown

This appendix gives an estimate of the total time required by each major phase of work during the software development lifecycle. These estimates are in no way final and serve only to aid in giving a general estimate of the team labor costs associated with completing this project as described in this document.

2. PROJECT SPONSOR AND SPONSOR NEED

This section will address identifying the project sponsor, the business of the sponsor, the vision of the sponsor, the need of the sponsor, the goals for the team, and the success criteria for the project at hand. The purpose for identifying these specific aspects of the project is to demonstrate to the sponsor that jBehaving deeply understands the sponsor's business as well as the sponsor's needs.

2.1. Sponsor Identification

The sponsor for the JBehaving senior project, also known as, GotTrackDays.com is the proprietor of Got Track Days Inc., namely, Juan Calderon. Mr. Calderon attended California State University, Sacramento (CSUS) to earn his Bachelor of Science in Computer Science as well as a Master of Business Administration. He also has several years of experience in the Information Technology industry. Therefore, Mr. Calderon has a deep understanding of the many ways in which technology can be leveraged to automate processes and facilitate high quality work. Mr. Calderon is a racing and automobile enthusiast which has inspired him to pursue his business venture.

2.2. Sponsor's "Business"

Got Track Days, Inc. has a mission to facilitate the organizing of "track day events" wherein Got Track Days, Inc. purchases track time at any given raceway or racetrack and then mediates, sells for profit, and/or allocates the allotted track time to its customers. Got Track Days, Inc.'s business model differs from other similar companies' business models. It differs by the way in which it partitions the track time of its customers on a given trackday.

In order to achieve a greater amount of track time for its customers, Got Track Days, Inc. will limit the downtime off of the track to a fixed time for each customer; just enough to rest and prepare for their next track run. Therefore, Got Track Days, Inc. customers will get more track time value for their dollar.

Got Track Days, Inc. will further differentiate itself from other track day organizers by providing a high level of transparency. This will entail providing a cost breakdown comparison tool, the Track Dollar Calculator, to objectively compare their price per track minute cost to the competition.

2.3. Description of the Need

From his many years of involvement in the track day culture, Mr. Calderon has come to realize the shortcomings of the current offerings in the track day event planning market. More specifically, that track day attendees tend to spend too much time waiting around and therefore, get frustrated by not being on the track, actively participating in the event. Mr. Calderon believes he can fill this need by offering track day events to his customers at a lower cost per minute of track time and by keeping the customers on the track for longer periods of time.

Currently, the sponsor is using online forums to inform and gather individuals interested in attending a track day event as well as gaining insight to their needs and wants related to track day events. After the attendees are secured, he collects money to pay for the day at the track. However, before the money can be collected, the track must be reserved with a non-refundable deposit. Therefore, if attendees cancel before their payment, then Got Track Days, Inc. must absorb the cost.

The aforementioned manual process is tedious and not sustainable. In an effort to automate business processes, leverage high quality customer services strategies, and to lower incurred costs, Got Track Days, Inc. endeavors to be technologically mature. Therefore, Got Track Days, Inc. has an explicit need for an efficient, centralized means of gathering and managing customer information, processing payments, managing event data, and providing information to employees.

2.3.1. Vision

The vision of Got Track Days, Inc. is to achieve excellence through technology and customer service. Regardless of locale, the customer shall be able to easily search, register for, and attend events at several different tracks.

Mr. Calderon has participated in the track culture for many years and understands what is currently offered and that those offerings can be wasteful with respect to time. Moreover, Got Track Days, Inc. will provide its customers with optimal break periods whilst allowing for maximum track time and therefore a better track day experience at a lower cost per minute of actual track time. This is something currently unavailable in the track day event market.

2.3.2. Goals

The primary goals for the project are as follows:

- To develop and deliver a software system to the benefit of the project sponsor.
- To provide the senior project team with a learning experience in which software engineering principles are applied to the development of a user specified software system.

Furthermore, as a team, the following outlines our professional goals and educational hopes for the given project:

- To learn new technologies prevalent in the Software Engineering field.
- To reinforce our knowledge of various programming languages.
- To impress our sponsor with high quality work such that he would be willing to recommend us as individuals to employers with potential career opportunities.
- To develop highly effective communication skills by interacting with the sponsor.
- To thoroughly mature our understanding of the SDLC and the mechanisms therein.
- To gain a deep understanding of modern business practices with respect to Software Engineering principles.

2.3.3. Success Criteria

We define the success of this project as delivering a functional website that generates value for our sponsor. More specifically, the website will have several key features:

Non-Registered Users are able to:

- Register as a registered user (make a username and password)
- Search events

Registered Users are able to:

- Log into account as registered user (account verification required by username and password)
- Search events
- Register for events
- View a history of their past, attended events
- Pay for events using PayPal, Google Wallet, and credit cards
- View a track dollar calculator to see actual cost of attending the event

Employees of Got Track Days, Inc. are able to:

- Log into account as employee (account verification required by username and password)
- View analytics to see which events are selling out or sold out
- Enter in new events
- View who attended each event
- View statistics of that person (vehicle they drove, event history)

Owner/Proprietor of Got Track Days, Inc. is able to:

- Log into account as owner (account verification required by username and password)
- Add employees to list of employee users
- Enter in new events
- View who attended each event
- View statistics of registered users (vehicle they drove, event history, amounts paid for events)
- View a report of all events for a given time period (showing if sold out, how many tickets left, attendees, amount paid, etc.)

3. MANAGEMENT PROPOSAL

This section specifies the management and control of the project development. This includes schedules of the various deliverables, resource requirements, estimated project costs, staff members, and team organization. These will all be discussed in terms of roles and responsibilities, quality assurance, and a change control process where changes are requested or proposed.

3.1. Work Schedule

The work schedule contains estimations of start and finish dates for each major phase of the software development life cycle, as well as a brief explanation of the specific work and deliverables to be accomplished during that phase of work.

Planning
Start: 01/28/2014 Finish: 02/17/2014
The planning section consisted of team selection, which subsequently included a Team Selection and Organization deliverable. This phase also included the combing through several project possibilities, hearing a few project pitches, and culminated with a question and answer session with the current sponsor, Juan Calderon, leading to a final team decision of selecting his project for the team.

Documentation
Start: 02/19/2014 Estimated Finish: 03/26/2014
Documenting the project, as understood by all parties involved, will primarily be accomplished through this document. The Charter will ensure that the project sponsor, the project advisor and the project team all fully understand each other's points of views about the project at hand. The Project Management Plan will also be documented to provide a record, guidelines, and practices for how the software development process will be managed and accomplished.

Requirements
Start: 03/19/2014 Estimated Finish: 05/07/2014
Most of the time spent during the first semester will be concentrated towards the requirements phase of the software development life cycle. The team will be gathering information from the sponsor in order to specifically address, understand, and spell out every aspect of the task at hand, and put that information in the SRS. This document will serve as the blueprint for the second semester of the project. The sponsor's involvement with the team, or team representatives, will likely be heaviest during this part of the process.

Design
Start: 09/02/2014 Estimated Finish: 09/22/2014
The design portion of this project will kick off the start of the second semester of work. This stage in the software development process uses the SRS to come up with visual models for software architecture, operation, and overall system design. All this will be collected into a document known as the Software Design Specification (SDS).

Implementation
Start: 09/23/2014 Estimated Finish: 12/01/2014
The team will use the SRS and the SDS to begin creating the system through programming code. This implementation step will be lengthy in time and require a lot of teamwork, but a working product will be produced. New code and code edits will likely be necessary after the testing phase has been completed, so this stage is ongoing in a sense.

Testing
Start: 11/04/2014 Estimated Finish: 12/01/2014
After all requirements and design elements have been implemented, a Software Testing Specification (STS) document will be prepared to aid in planning the testing of the softwares. Once that document is complete, testing will officially begin, and the test cases implemented. Bugs will be found and a System Test Report (STR) will be compiled based on the testing results. The bugs will then be addressed, code revisions will take place, and the software will be retested. This process will repeat until the software meets acceptance criteria.

3.2. Resource Requirements

The following lists potential resources necessary to be successful with this project. Some items may or may not actually be needed and other items may end up being necessary that are not currently listed. We reserve the right to change, drop, or add resources as necessary. Time commitments listed are strictly a general estimate and will fluctuate some.

Materials
- Printing supplies for turning in deliverables
  - marginal fees may apply, if printing on campus

Software & Tools
- Google Drive
- Google Hangout
- Google Apps
- GitHub
- Producteev
- Eclipse or similar IDE

Time (16 weeks for CSc 190 and 16 weeks for CSc 191)
- 1 hour 15 minutes of class time each week
- 1 hour team meeting per week
  - additional meetings may be necessary
- 30 minute advisor meeting per week
- 1-4 additional hours per week, per team member

Other
- Sponsor would like to use professional graphics designer for design of logos and other art

3.3. Cost

Senior projects, while "expensive" in the use of team members' time, are undertaken with no expected cost to the sponsor. Consequently, the costs estimated in this subsection are hypothetical and have been developed as examples to illustrate cost estimation concepts used in proposal writing. As such, the cost estimates do not represent costs expected to be incurred or reimbursed.

ITEM	COST
Graphics Designer*	$3,500
Printing Costs	$50
Software & Tools	$0
Labor**	$21,000
TOTAL	**$24,550**

Table 3.3 – Total Estimated Costs

*estimate given by sponsor

**see Appendix D for breakdown

3.4. Organization and Staff

Members of the team and their respective roles to be performed are described below. The key responsibility of Project Manager will be rotated among all team members throughout the entire process.

TIME FRAME	NAME
January 27 through March 10	Cody Lanier
March 11 through April 14	Ashley Finger
April 15 through May 23	Bai Xiong
September 2 through October 13	Michel Watson
October 14 through November 17	Cody Prior
November 18 through December 19	Daniel Gallegos

Table 3.4.1 - Project Manager Rotation Schedule

NAME	PRIMARY	BACKUP
Ashley Finger	Documentalist Deliverables Printer	WBS Keeper
Bai Xiong	Stenographer Minutes Organizer	Documentalist Sponsor Liaison Deliverables Printer
Cody Lanier	Agendas Organizer Sponsor Liaison	Task Creator
Cody Prior	WBS Keeper	Time Keeper
Daniel Gallegos	Task Creator	Decision Tracker Stenographer
Michel Watson	Time Keeper Decision Tracker	Agenda Organizer

Table 3.4.2 - Team Member Responsibilities

3.5. Quality Assurance

To maintain quality and effectiveness within the process of the project, technical reviews will be conducted with each document deliverable. A brief overview and walkthrough will be conducted with the team's faculty advisor to gain feedback and guidance in completing documents. In addition, members of the team will pair up with another member to review each other's work and provide feedback where possible. Members will also be able to view the documents continuously and can leave feedback as comments within the document for further discussion. Testing of the product throughout development will aid in maintaining a quality end product.
Once the deliverables have been approved by the team and faculty advisor, project deliverables will be provided to the sponsor for approval of baseline products.

3.6. Change Control Process

The following is the process that will be taken when changes to the project are being requested or proposed to the team.

1. Change request proposed - any change(s) or request(s) for change is proposed to team for discussion.
2. Complete Change Request Form - a Change Request Form will need to be completed with all relevant information to the change(s) being requested.
3. Team Review - the team will collaborate and discuss the change(s) being requested and the impact to the current progress of the project.
4. Analyze impact of change to project.
    a. If the change(s) are minor and will not increase the scope of the project, the team will make a decision to grant the change(s) per the request. The change(s) will be communicated to the team, sponsor, and advisor to verify that everyone understands the change(s).
    b. If changes will increase the scope of project, the following will be done:
        i. Present the results of analyzing the impact of the changes to the current progress to the sponsor. The analysis results will include cost of the changes, how severe the changes will be to the current progress of the project, and other additional changes that may occur if the requested changes are granted.
        ii. Negotiate features and functions of project that has highest priority to the sponsor. Other features and functions may be removed to accommodate for the change(s) being granted (if the change(s) are granted) to provide a product of most value to stakeholders.
5. Document changes and decisions in Decision Traceability Matrix and in the minutes of any meetings held to address the requested change(s).

4. CONDITIONS AND COMMENTS

This section defines the terms and conditions by which team jBehaving will work on the project, and the level of collaboration and coordination required from Got Track Days, Inc. This represents general guidelines for the design and implementation of the project. Exact requirements will be elicited and specified in the Software Requirements Specification.

4.1. Assumptions and Constraints

Due to the nature of the project and the team, there are certain assumptions that we make before defining conditions of the work to be performed. The assumptions are as follows:

1. Team jBehaving is a group of students and the project is related to a course requirement at CSUS. As such, the timeframe of the project is limited to the Spring 2014 and Fall 2014 academic semesters.
2. As this project is part of coursework for a two semester-unit course, there are expectations on the amount of weekly hours provided by a single student, and these are significantly less than would be expected from a full-time employee.
3. The sponsor understands that the scope of any deliverables will be affected primarily by points one and two.
4. The sponsor's input is necessary to the development process. The sponsor understands that the sponsor is expected to provide time for meetings, technical reviews, testing, and approvals as necessary.
5. Team jBehaving understands that the sponsor is not able to devote themselves full time to the development process and must take this into consideration when soliciting the sponsor's time.
6. Any software produced by team jBehaving should conform to any applicable standards as best as possible.
7. The software produced by team jBehaving may need to interface with existing systems for social media and online commerce as requested by the sponsor.
8. The sponsor bears no financial responsibility for the development process.
9. Team jBehaving, to reduce development costs and maintenance costs for the sponsor, will use open source for any software libraries or needed infrastructure when possible.
10. The sponsor may need to provide team jBehaving access to any infrastructure, i.e. web hosting services, needed for the final delivery of the software
11. The sponsor will maintain full access to any infrastructure or hosting services needed for final delivery.

4.2. Limiting Conditions

For the project, GotTrackDays.com, there are very clear needs that the sponsor has expressed as well as some wants. A need, in the case of this project, is classified as a requirement that the website needs in order to function properly and/or a requirement that the sponsor needs in order for his business, Got Track Days, Inc., to use GotTrackDays.com successfully. A want, in the case of this project, will be classified as something that is not required for full functionality of the website and/or something that the sponsor has requested that team jBehaving attempt to accomplish, but is not critical. It is known that the needs of the sponsor will be completed, whereas the wants will be completed if there is enough time to attempt them.

When discussing anything with the sponsor, Juan Calderon, the team will give a time estimate on when tasks are expected to be finished so that all parties will ensure that the development will be successful. The team lead will delegate tasks and a due date for each task during team meetings each week. Each task will be carefully tracked in the team's Producteev account online and if needed, can share that account with the sponsor so that he can visually see the progress that we are making each week.

Each team member is expected to put in approximately the same amount of time each week for the GotTrackDays.com project development and will be expected to attend and fully participate in team, advisor, and sponsor meetings. Sponsor meetings will be held no less than once a month so that Juan may view our progress, voice any concerns, and also work out resolutions to obstacles that may have arisen. Further communication with the sponsor can also be made by the team's sponsor liaisons via email, chat, or phone to address any questions that may come up in between sponsor meetings with the whole team.

4.2.1. Factors Associated With the Academic Nature of the Project

All of the following issues will need to be documented by the team because of the academic nature of the work done.

- Agendas for all meetings held by the team
- Minutes for all meetings held by the team
- Task delegations
- Task completions
- Decisions made by the team in regards to any aspect of the project
- Sponsor comments and concerns
- Advisor comments and concerns
- Document and project approvals by the team members, advisor, sponsor, and teachers

4.2.1.1. General Disclaimer

All students majoring in Computer Science at CSUS are required to complete a two semester, senior project. The project proposed, GotTrackDays.com, is expected to fulfill this requirement for the jBehaving team, Ashley Finger, Bai Xiong, Cody Lanier, Cody Prior, Daniel Gallegos, and Michel Watson. While the intent of the team is to deliver a high quality product that meets the sponsor's expectations, neither the students, faculty adviser, or CSUS can be held responsible for any errors in the delivered software product, failure to meet any of the specified requirements, or failure to deliver the software.

Furthermore, due to the academic nature of the experience and its requirement for graduation, students cannot be paid for the work associated with the project.

4.2.1.2. Support Limitations

By accepting this proposal, the sponsor recognizes that upon completion of the project and delivery of the proposed system, neither the senior project team nor any other representative of CSUS is obligated to provide software maintenance or additional support. Senior project work cannot be extended beyond the completion date set for CSc 191. Upon completion of this project, the team will provide the sponsor with a working website (www.GotTrackDays.com) that meets all of the needs specified and agreed upon by the team, sponsor, and teachers for the Sr. Project at Sacramento State University (CSc 190 and CSc 191).

4.2.1.3. Ownership of the Product

The project, GotTrackDays.com will be completed in its entirety by the jBehaving team. However, there will be no formal agreements as to the ownership of the software. Once the jBehaving team has completed the Sr. Project, the team will no longer be responsible for the preservation or repair of the software. Since this project is an academic requirement, the project will not be considered as work done by the University.

During the course of the project, ownership of GotTrackDays.com will be shared with the sponsor and the team. At the end of the senior project, any and all software and supporting documentation that was created for the GotTrackDays.com website will be delivered to the sponsor, which will then end the team's responsibility in creation, and/or upkeep of the website.

The team members maintain nominal ownership and the sponsor will receive all the specified documentation along with the software, including both source and executable code. The Computer Science Department reserves the right to use the documentation and the product as examples of student work.

4.2.2. Other Disclaimers

In addition to committing to the completion of all the needs the sponsor and the team have agreed upon, the team will meet with the sponsor to discuss any of his wants that they may have time to attempt. The wants however, will not be attempted until all the needs are completed in the entirety, including but not limited to documentation of requirements, development, and testing.

5. APPROVALS

Approval signatures will be collected from each of the jBehaving team members, as well as from the advisor and the sponsor. These approvals will signify that each person fully understands this document and approves of its overall content.

By endorsing below we hereby agree to the preceding information; that the information accurately and honestly represents the wishes of the sponsor and the intentions of the team. Furthermore, by endorsing below, we acknowledge that the content of this document is in essence a living, breathing entity and therefore may change over time as agreed upon between the team and project sponsor.

Sponsor:

Juan Calderon: _____ **Date:**_____

Advisor:

Dr. Meiliu Lu: _____ **Date:**_____

jBehaving:

Ashley Finger: _____ **Date:**_____

Bai Xiong: _____ **Date:**_____

Cody Lanier: _____ **Date:**_____

Cody Prior: _____ **Date:**_____

Daniel Gallegos: _____ **Date:**_____

Michel Watson: _____ **Date:**_____

APPENDICES

APPENDIX A: Project Team Experience

Each team member generally describes their academic and professional backgrounds in relation to the Computer Science field. This information can be helpful in assessing potential strengths and weaknesses, which can then be used to identify potential assignments for each team member.

Ashley Finger

I started my love for computer science many years ago and started going to classes at the Jr. College near my home. I quickly got my Associates of Science degree in computer science using C++ and C# primarily and went on to Sacramento State University to get my Bachelors of Science degree. I have been on many teams of computer scientists through school and work which have helped me grow into the great programmer that I am today. I have designed some small 3D graphics applications using OpenGL and GLSL (graphics programming languages) integrated with Java, as well as a 2D game using object oriented design patterns and Java Swing classes. I am very eager to learn more about any programming language.

Bai Xiong

I started school as a computer science major and came to love it. Initially, my classes began with C++ and C. From there, I dove into learning Java from outside projects that I participated in. Through the Give Camp program, my team of four students created an android application using java for a non-profit organization, Big Brothers Big Sisters. From there, I also participated in an event called 59 Days of Code where my team used Unity3D and JavaScript to develop a web-based game to provide students a tool to learn more about Computer Science. Just recently, I learned HTML, PHP, and MySQL to develop a web ticket tracking system. I am a quick learner when it comes to new languages and have some experience in UNIX and Assembly as well.

Cody Lanier

After leaving the military in 2010, I decided to do something that I enjoyed and that I was really good at. Computers was that “something”. I started a small residential computer repair business and signed up for classes starting that Fall. I also took on a personal project, which was an online two player card game program, and that’s how I learned C# and .NET. I became very familiar with Java throughout my schooling, and then it was reinforced in the real world when I took an internship at Vision Service Plan Global as a developer and tester. I pick up new programming languages quickly, and consider myself to be pretty good with PHP, HTML, MYSQL, Scheme, and Prolog, to name a few. My weakness is probably in dealing with UNIX and I have not had much experience beyond the basics with C++.

Cody Prior

I began coding in 2009 while attending Sierra College. I had always spent the majority of my time either on a computer or playing video games, so Computer Science seemed like the best fit career-wise. At Sierra, I learned the basics of both Java and C++. In 2011, I transferred to Sac State to finish my BCS. Since then, I've become much more adept at Java, while also picking up experience with C, PHP, MySQL, HTML, and a bit of Python.

Daniel Gallegos

My first experience programming was when a friend convinced me to take a C++ class with them at Solano Community College. I had a blast, and that propelled me towards programming and Computer Science. I eventually ended up as an Information Systems Analyst with the State of CA, and spent time as an IT support lead with the Department of Corrections. After four years providing IT services, I realized I didn't want to just use and support technology, but develop it also, and I embarked to finish my Bachelors of Science at Sac State in Computer Science. In 2013, I worked with the Department of Water Resources testing applications and writing documentation, and I now work at VSP as an Intern Developer. I have experience in languages like C, C++, Java, Visual Basic, Python, and SQL, and passing familiarity in HTML/CSS, PHP, and JavaScript. I also have experience in networking and server support with Windows and Unix-based systems.

Michel Watson

My first experience with computer programming came in 1992 when I taught myself Qbasic by developing a text based RPG/fantasy game. I then moved to Pascal and C in high school. I began working in the IT industry in 1999 as part of a high school IT ROP program. After high school I attended Heald College in Roseville, CA to earn a degree in Computer Technology. From 2007 until 2013 I worked as a Systems Engineer / Programmer at Mitsubishi Rayon in Sacramento, CA where I developed internally facing software to automate business processes. In this role, I developed software fully through all stages of the SDLC; usually in a solo effort. Although my projects where wide ranging, I typically developed custom software to integrate high precision measurement devices with backend environments in order to facilitate data warehousing and non-interventive data acquisition. Now I work at VSP as an App Developer Intern in a continuous integration environment, developing and implementing regression tests. Moreover, I have experience with many technologies and with learning new technologies quickly to produce highly valuable software.

APPENDIX B: Partnership requirements between the team and the sponsor

The sponsor and the team should review the items in this appendix, which describe the relationships and requirements between both entities. In so doing, both parties should reach an understanding regarding the shared responsibility that is the project at hand.

B.1 Requirements Bill of Rights for Software Customers

The project sponsor has the right to:

- Expect the team to speak your language.
- Expect the team to learn about your business and your objectives for the system.
- Expect the team to structure the requirements information you present into a software requirements specification.
- Have the team explain requirements work products.
- Expect the team to treat you with respect and to maintain a collaborative and professional attitude.
- Have the team present ideas and alternatives both for your requirements and for implementation.
- Describe characteristics that will make the product easy and enjoyable to use.
- Be presented with opportunities to adjust your requirements to permit reuse of existing software components.
- Be given good-faith estimates of the costs, impacts, and trade-offs when you request a requirement change.
- Receive a system that meets your functional and quality needs, to the extent that those needs have been communicated to the team and agreed upon.

B.2 Requirements Bill of Responsibilities for Software Customers

The project sponsor has the responsibility to:

- Educate team about your business and define jargon.
- Spend the time to provide requirements, clarify them, and iteratively flesh them out.
- Be specific and precise about the system's requirements.
- Make timely decisions about requirements when requested to do so.
- Respect developers' assessments of *scope* and feasibility.
- Set priorities for individual requirements, system features, or use cases.
- Review requirements documents and prototypes.
- Promptly communicate changes to the product's requirements.
- Follow the team's defined *requirements change process*.
- Respect the requirements engineering processes the team uses.

APPENDIX C: Phases of Work for both CSc 190 and CSc 191

This appendix identifies the phases of work in both CSc 190 and CSc 191, the deliverables associated with each phase, and the approval requirements.

The following table identifies each of the phases of work that are to be completed in developing the software for the team's project sponsor. Associated with each phase is a baseline deliverable indicated in the second column. The last column indicates those deliverables that must be reviewed and approved by the sponsor. The team's faculty adviser is responsible for reviewing and approving the final draft of each baseline document. In the case where the sponsor must also approve the document, the faculty advisor's approval is necessary before submitting the document to the sponsor.

PROJECT PHASE	PHASE DELIVERABLE	APPROVALS*
Establish the Vision and Scope of the Project	Project Charter	Sponsor
Develop and define the project management plan	Project Management Plan Software	
Elicit, analyze, analyze, specify, validate, and publish the requirement specifications	Requirements Specification	Sponsor
Design the software	Software Design Specification	
Implement the software design specifications	The Software	
Develop and define the system test plan and specify all necessary test cases	System Test Plan and Test Cases	
Perform system testing and publish the results	Testing & Software Test Report	
Prepare materials to be delivered to the sponsor at the final product acceptance meeting	Software Delivery Materials (includes the User Manual and Delivery CD)	Sponsor
Time spent developing the skills and knowledge necessary to complete the project	Learning (all phases)	NA
Time spent by the team and its members in the management and control of the project	Project Management (entire project)	NA

Table C.1 - Project Phase, Deliverable and Approval

*All final documents must be approved by the team's faculty adviser. For those requiring approval by the sponsor, the project adviser must first approve the document before it is provided to the sponsor.

PROJECT PHASE	EST % OF WORK
Establish the Vision and Scope of the Project	10%
Develop and define the project management plan	7%
Elicit, analyze, verify and publish the requirement specifications	21%
Design the software	7%
Implement the software design specifications	7%
Develop and define the system test plan and specify all necessary test cases	10%
Perform system testing and publish the results	7%
Prepare materials to be delivered to the sponsor at the final product acceptance meeting	2%
Time spent developing the skills and knowledge necessary to complete the project	8%
Time spent by the team and its members in the management and control of the project	21%
TOTAL	100%

Table C.2 - Project Phase and Estimated Percentage of Work

APPENDIX D: Estimated Labor Costs Breakdown

This appendix gives an estimate of the total time required by each major phase of work during the software development lifecycle. These estimates are in no way final and serve only to aid in giving a general estimate of the team labor costs associated with completing this project as previously described in section 3.3 of this document.

PHASE	TIME (hours)
Charter	40
Project Management Plan	30
Software Requirements Specification	90
Software Design Specification	60
Programming	100
Software Testing Specification	40
System Test Report	30
Other	30
TOTAL HOURS	**420**
TOTAL COSTS*	**$21,000**

Table D – Estimated Labor Costs Breakdown

*Labor rate estimated at $50 per hour