**Project Plan, Team Charter**

**How To Train Your Dragon Boat**

**GBC Dragon Boat Team**

|  |  |
| --- | --- |
| Industry Partner | GBC Dragon Boat Team |
| Primary Instructor | Anjana Shah |
| Team Member | Giuseppe Ragusa |
| Team Member | Andrew B. Cobb |
| Team Member | Arsalan Farooqui |
| Team Member | Nga Le |

Document Revision History

|  |  |
| --- | --- |
| Revision # | Date |
| 0.1 | 10/01/2019 |
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| 2.0 | 1/18/2020 |

**Table of Contents**

**1. Executive Summary**

The following describes the project to be executed.

|  |  |
| --- | --- |
| Objective | To assist the GBC Dragon Boat Team with an efficient application designed to automate the process of team management and the tracking and recording of performance details of the team. This will resolve the current issue of manually assignment the team members and recording information, a task that proves to be inefficient and unenjoyable. |
| Corporate Goals Addressed | * An efficient method of assigning team members to specific Dragon Boat layouts * A way to evaluate the layout of the team members in the boat by detailing information * The ability to track and record information about the performance of the dragon boat members including velocity, distance, etc. * The option to store and manage routes and team members within the application |
| Planned Start Date | Sept. 23 2019 |
| Planned End Date | March 27, 2020 |

**2. Project Approvers, Reviews and Distribution List**

Approvers, reviewers and distribution list

|  |  |  |  |
| --- | --- | --- | --- |
| Project Role | Name | E-mail | Date |
| Scrum Master | Giuseppe Ragusa | Giuseppe.Ragusa@georgebrown.ca | 1/18/2020 |
| Head Programmer | Andrew B. Cobb | Andrew.cobb@georgebrown.ca | 1/18/2020 |
| Project Manager | Arsalan Farooqui | Arsalan.farooqui2@georgebrown.ca | 1/18/2020 |
| Programmer | Nga Le | Nga.le@georgebrown.ca | 1/18/2020 |

**3. Scope**

Define the sum total of all of its products and their requirements or features.

|  |  |
| --- | --- |
| In Scope | Out of Scope |
| Features designed for use as a Mobile Application | Other platform functionality beyond Mobile |
| Efficient method of team management when assigning boat layouts with layout information | Setting custom paths for boat routes |
| Map providing the location of the boat team with routes. | Location finding using the map interface |
| Information about the boat’s performance during races | Operating systems beyond Android and iOS |
| Compatibility with other mobile related platforms including tablet | Minimal internet usage beyond map interfaces |
| Compatibility with both Android and iOS operating systems |  |
| CRUD interface for managing routes and team members stored within the application |  |
| SQLite database storage |  |
| Communication between team members through email |  |

**4. Deliverables**

This project will deliver the following.

|  |  |
| --- | --- |
| Deliverable | Description |
| An Interactive GUI displaying team members and available positions on the boat layout | This feature will be implemented via a Drag-and-Drop or a Tap-and-Place interface, providing an efficient method of assigning Dragon Boat team members to the boat layouts. |
| A Tab providing details on the current boat layout as the members are being assigned | The tab will provide information about the boat layout such as weight distribution and will update accordingly as the layout is filled with boat members. |
| An option to save the current layout and to load previously saved layouts | Created boat layouts with member placements in each can be stored and loaded for future reference and avoid the process of recreating a specific layout |
| A map indicating the position and location of the boat | The map will provide an accurate position of the boat and the surround area, giving the team members knowledge of the surround area |
| An option to track the route that the boat is currently taking | The boat’s position will constantly be tracked over a constant interval, creating a path of previous positions that will form the route the boat took. |
| The ability to save the current route the boat recently took, and load previous routes. | This feature ties in with the previous feature as being able to save the recently created route in a database. These routes can be loaded and viewed at will if the members decide to repeat a previous route |
| A tab displaying information regarding the boat’s performance | The tab will use features such as the boats position and the route it took to provide information include the distance the boat travelled, the current velocity of the boat, the direction of the boat, etc. |
| A CRUD interface to manage both the save route layouts and the team members | Both routes and team members will have their own interface for managing data, but each will act in similar functionality. The interfaces will make management of data more efficient |

**5. Assumptions**

This project makes the following assumptions;

* Project Members are willing to adapt to different roles to fulfill a requirement or assist another member due to the lack of members in the project.
* Team communication and meetups will not become unachievable as a result of changes in the educational activities each project member is involved with.
* Project members will adhere to the communication plans and project requirements specified within the documents
* Failure to comply with the set deadlines will result in the delay of the rest of project
* Project members are willing to familiarize themselves with new technologies and languages if it becomes a requirement
* The Project Plan and any of its sections include Scope, Risk Management, Requirements, features, etc. may change as situations arise.
* The online marketplace will be able to support the application as it is distributed to its users
* The GBC Dragon Boat Team will have limited involved in the development of the application.
* The React Native libraries and framework being used for this project will continue to be supported by Facebook
* The chosen map API that the application will use continues to provide free support
* The database chosen for the application will be continuously provided for mobile development
* The Users of the application will meet the requirements to run the application on their mobile device.

**6. Dependencies**

The following are the internal and external dependencies that will have to be acknowledged and addressed;

* Non-Functional Dependencies:
* Users of the application must have location enabled for the map API to function properly
* Access to an iOS device or software is needed to test iOS support
* Access to an Android device or software is needed to test Android support
* Functional Dependencies \*\*:
* NPM install packages
* React native NPM library
* React native navigation NPM library
* React native drag-and-drop NPM library
* React native maps NPM library
* React Native Gestures NPM Library
* React native animation NPM library

\*\*For simplicity, only major library dependencies have been listed, as actual number of dependencies needed is of a much larger quantity because of the use of the Node JS NPM Library.

**7. Risk Management**

|  |  |  |  |
| --- | --- | --- | --- |
| Potential Risk | Severity (H/M/L) | Likelihood (C/H/M/L) | Management Strategy |
| **Project Definition** |  |  |  |
| Project Duration | High: 8 months | Certain | Effective and Detailed Project Plan with constant meetings |
| Project Scope Creep | Low: Scope Requirements are defined and achievable, future revisions possible | Low | Scope will be reviewed periodically by group members to ensure that future requirements are within scope |
| Project Budget Creep | Low: Project designed around no cost or budget | Low | Development environments will be free to use or open source, Developers limited to project members |
| Timeline is unachievable or unrealistic | Medium: Timeline based on present knowledge | Low | Deadlines of tasks and processes constantly monitored and reviewed to ensure no derailment of set timeline. |
| **Project Staff** |  |  |  |
| Number of Members limits progress | Medium: 4 Members | Medium | Effective communication of plan, tasks, requirements, and strict development schedule |
| Project Schedule interfered by Education Schedule | High: All Project Members are active participants in education, weekly occurrence | Certain | Project Timelines and Task Durations design with education as a factor, includes deadlines to be extended if absolutely necessary |
| Absence of Project Member during meeting | Low: Communication with all members established outside meetings | High | New Meetup date will be set to accommodate the member, or information from the current meeting will be relayed to the absent member. |
| Project Members varying experience will cause discoordination | Low: Project Members have worked on multiple projects with proper coordination | Low | Communication will be established with all members to coordinate tasks that each member prefers |
| Weak User Activity | Low: A project member is a user | Low | Specified Project Member will provide information required regarding users |
| Project Roles Unclear | Low: Members are aware of main roles | Low | Project Members will review responsibilities if needed. |
| **Project Management** |  |  |  |
| Project Methodology foreign to project members | Medium: previous experience with other methodologies and requirements. | Medium | Previous experience will be used as a tool for development throughout the project |
| Specific Project role lacks a defined member | Low: Members are willing to adapt to different roles. | High | Project members will discuss who will assume temporary roles when needed |
| **Software Vendor** |  |  |  |
| Experience with software IDEs is lacking to project members | High: No Previous experience with IDE or field | High | Evaluation process will be done with project members and software environments to familiarize them with each IDE. |

**8. Communication**

**Reporting**

The following reports will be produced;

|  |  |  |
| --- | --- | --- |
| Report | Audience | Frequency |
| Minutes of Meeting | Project Members:   * Giuseppe Ragusa * Andrew B. Cobb * Arsalan Farooqui * Nga Le   Anjana Shah | Weekly |

**Meetings**

The following meetings/communication will be established;

|  |  |  |  |
| --- | --- | --- | --- |
| Meeting | Purpose | Attendees | Frequency |
| Weekly Capstone Meeting – C401 | A Meetup to discuss future endeavors and plans for the project, including tasks, plans for upcoming requirements, or resolving issues that project members may have encountered | Giuseppe Ragusa, Andrew B. Cobbs, Arsalan Farooqui,  Nga Le | Weekly, Tuesdays at 12pm |
| Library Capstone Meeting – GBC Library Whiteboard rooms | A meetup similar to the weekly capstone meeting, but with the main objective being to discuss a major upcoming task or requirement and plan accordingly. | Giuseppe Ragusa, Andrew B. Cobbs, Arsalan Farooqui,  Nga Le | Monthly, Date will vary depending on team member availability |

**9. Task Listing (WBS- Work Breakdown Structure)**

The following resource proposal template summarizes the resource hours committed to this project, upon final approval of this document.

|  |  |  |  |
| --- | --- | --- | --- |
| Reference | Tasks | Duration(days) | Dependency |
| A | Database Schema and Design | 1 |  |
| B | UML Diagrams | 2 |  |
| C | Design in App Navigation structure | 2 | B |
| D | Designing application screen wireframes | 1 |  |
| E | Studying further on NodeJS | 3 |  |
| F | Learning React and React Native Library | 3 |  |
| G | designing and creating database | 2 |  |
| H | Creating folder hierarchy | 1 | B |
| I | create models and class structure | 2 | A, B |
| J | Implement basic navigation structure | 1 | B, C |
| K | Test navigation | 1 | I, J, B, C |
| L | Create home screen | 1 | I, J, B, C |
| M | create layout screen | 1 | I, J, B, C |
| N | Create boat layout page | 1 | I, J, B, C |
| O | test layout screen | 1 | N |
| P | implement boat layout | 2 | I, J, B, C |
| Q | test boat layout | 1 | P |
| R | create people screen | 1 | I, J, B, C |
| S | create add person page | 1 | I, J, H, B, R |
| T | test people screen | 1 | S |
| U | create ready screen | 1 | I, J, B, C |
| V | implement google maps API | 2 | U |
| W | implement stopwatch | 1 | U |
| X | implement creating graphs | 1 | I |
| Y | test ready screen | 1 | U |
| Z | create analytics screen | 1 | I, J, B, C |
| AA | implement viewing graphs | 1 | X |
| BB | test analytics screen | 1 | Z |

**10. Gantt Chart**

**A screenshot of a computer

Description automatically generated**

**11. Milestones**

|  |  |  |
| --- | --- | --- |
| Major Activity or Milestone | Estimated Milestone Target date | Owner/Reviewer Team Members |
| Complete UML, Schema and Design, and application planning | Dec. 2019 | Andrew |
| Create first React phone application | Dec. 2019 | Arsalan |
| Implementation of Application Navigation | Jan. 2019 | Arsalan |
| Implementation of SQLite Database storage | Jan. 2019 | Andrew |
| Implementation of Google Maps API | Feb. 2019 | Nga |
| CRUD interface for application | Feb. 2019 | Giuseppe |
| Complete all pages of the Application | Mar. 2019 | Giuseppe/Andrew/Arsalan/Nga |
| Have full functionality of Application | Mar. 2019 | Andrew/Giuseppe/Arsalan/Nga |
| Add nice to haves and styling to application | Mar. 2019 | Arsalan/Giuseppe |

**12. RAM – Responsibility Assignment Matrix**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Andrew Cobb | Giuseppe Ragusa | Arsalan Farooqui | Nga Le |
| Database Schema and Design | P |  | S |  |
| UML Diagrams | P |  | S |  |
| Design in App Navigation structure |  |  | P |  |
| Designing application screen wireframes |  | P | S |  |
| Studying further on NodeJS | S | S | P | S |
| Learning React and React Native Library | S | S | P | S |
| Designing and creating database | P |  |  |  |
| Creating folder hierarchy |  | S | P |  |
| Create models and class structure | P | S | S |  |
| Implement basic navigation structure |  | P | S |  |
| Test navigation |  | P |  |  |
| Create home screen |  |  | P |  |
| Create layout screen |  | P |  |  |
| Create boat layout page |  |  | P |  |
| Test layout screen |  | P |  |  |
| Implement boat layout | S |  | P |  |
| Test boat layout |  |  | P |  |
| Create people screen | S | P |  |  |
| Create add person page | P | S |  | S |
| Test people screen |  | P |  |  |
| Create ready screen | P |  | S |  |
| Implement google maps API | P |  |  | S |
| Implement stopwatch | P |  |  | S |
| Implement creating graphs | P |  |  | S |
| Test ready screen | P |  | S | S |
| Create analytics screen | S |  | P |  |
| Implement viewing graphs |  | P | S | S |
| Test analytics screen | P |  |  | S |

**13. Approval**

The signatures below indicate their approval of the contents of this document.

|  |  |  |  |
| --- | --- | --- | --- |
| Project Role | Name | Signature | Date |
| Head Programmer | Andrew Cobb | Andrew.cobb@georgebrown.ca | 1/14/2020 |
| Project Manager | Arsalan Farooqui | Arsalan.farooqui2@georgebrown.ca | 1/14/2020 |
| Scrum Master | Giuseppe Ragusa | Giuseppe.Ragusa@georgebrown.ca | 1/14/2020 |
| Programmer | Nga Le | Nga.le@georgebrown.ca | 1/14/2020 |

**TEAM CHARTER**

Multiple reasons exist for preparing a team charter. One is to document the team's purpose and clearly define individual roles, responsibilities, and operating rules. Next, it establishes procedures for both the team and management/industry partner on communicating, reporting, and decision-making procedures. It lays out a blueprint for conducting business for the acquisition and defines how the team works in an empowered manner, including setting out responsibility and authority. Finally, it facilitates stakeholder buy in by including key members in the decision-making process and obtaining their concurrence along the way.

The charter includes the following sections:

1. **Purpose**

The purpose for the creation of the team for this project was to open up the team and its members to a unique opportunity of developing a mobile application and introducing a field that they will gain a lot of experience from as developers. The anticipated result from this opportunity will be to provide project members firsthand experience in the development of mobile applications, which will be passed along throughout their careers. Additionally, the development of this application will provide a benefit to the mobile application marketplace, as a unique service designed to fit the needs of those participating In Dragon Boat activities, a service not often available in the mobile department.

2. **Background**

The project is a Dragon Boat Application that will assist users who are involved in Dragon Boat activities by providing a variety of utilities to meet their needs. The group of members who are taking part in the project development are well acquainted with each other, having worked in a variety of projects recently and having similar experience within the field. Users of the application will not just be limited to dragon boat members, and instead branch out to consumers who may be interested in the features provided in the application for other boat related needs. The GBC Dragon Boat team is the current stakeholder, who have shown an interest in the development of project. However, their role in the development process will be limited, therefore the project members will be more independent from the stakeholder.

3**. Scope**

The How To Train your Dragon Boat project’s main goal is to create a dragon boat utility application that will be designed for mobile devices. The app will be multiplatform, supporting android and apple devices, and support other devices including tablets, but will not support other operating systems beyond iOS and Android. The team associated with the project is responsible for the development of this application, ensure that it will be a user-friendly application that will accommodate the needs of not only dragon boat members, but any consumers interested in boat features. The applications features will include the ability to create, manage and save layouts that will be used for the assignment of the boat’s members, using an interactive interface. It will also display information about the current boat layout, such as the weight distribution of its members. The application will also provide a map that will display details about the boat’s current performance including at a minimum, the boats speed and distance. Additionally, the application will be able to track the route the boat is taking and have the ability to save those routes for future use. The map however will be designed for this specific purpose and will not provide the option to search for destinations or specify designated paths as a normal GPS map would. Information about any saved routes and the dragon boat team members will be manageable via a CRUD interface, using a local SQLite database.

4. **Team composition**

Our team is comprised of four programmers who share expertise in application design and development. While each member will take on some leadership for some aspects of the project, due to the small size of our team all members are considered core members for all aspects of the project. The team members for this project and their responsibilities are:

* Arsalan Farooqui – as Project Manager, they are responsible for the project vision, specifying the requirements and features needed for the scope, and ensuring that development is up to par with the requirements and deadlines. Additionally, is a member of the George Brown Dragon Boat team, and therefore has a high degree of communication with its members to analyze needs and the requirements for the project.
* Giuseppe Ragusa – as Scrum Master, they are responsible for analyzing the current progress of the team, setting the short terms goals for each sprint or milestone, and ensuring that all requirements are met before the deadlines. Also responsible for the organization of team meet ups and ensuring that communication to all team members is established on a consistent basis.
* Andrew B. Cobb – As Head Programmer, they are responsible for the overall development progress of the application, the implementation of the project during final phases, and ensuring that all coding standards within the application are met. They will also manage and organize the code provided by other team members, and ensuring they are functional within the overall application.
* Nga Le – As a programmer, they are responsible for designing, writing, reading, testing, and correcting code for the application, establishing parameters and designing the architecture of the application, running QA testing and searching for bugs in developing the application, reporting to Head Programmer and Project Managers on the development of the application, testing and implementing application updates and improvements when necessary, writing documentation for updated application.

5. **Team empowerment**

Each team member will take on responsibility for tasks each sprint in accordance with their role and strengths. While each team member is responsible for their tasks, they are encouraged to seek help from other team members and to delegate sub tasks as required to meet the sprint goals. Due to the small size of the team, members may be expected to take on some additional responsibilities beyond their major role in order to ensure deadlines. Instances of this will include taking leadership in the completion of certain sprints or milestones or serving as additional support during the development phase. If it appears sprint goals are in danger of not being met the division of responsibility for tasks will be re-examined to ensure that team members have the resource to complete tasks. All members must be present for the re-examination of project responsibilities and must agree upon the proposed plan in order to prevent any form of confusion during project communication.

6. **Team operations**

All major decisions are to be made by unanimous decisions by all team members, this includes adding new members to the team. If it is felt that a team member is unable to continue to work on the project, then the team will meet with all involved and come to a fair decision involving marks and continued participation of the project. All team members are expected to complete there agreed upon responsibilities by the due dates should unforeseen circumstances prevent this the team should be informed immediately so that the problem may be addressed. Communication between team members will primarily exist during weekly meetings, during which members will discuss the current situation and the upcoming goals and deadlines that must be met before the next meetup. Outside of meetings, any form of communication will be done through group chats, to ensure that any or all members are within contact at any given moment. All work will be submitted to the team git hub repository and reviewed by all team members before submission.

7. **Team Performance Assessment**

Performance will be measured through the completion of milestones and tasks along with GitHub activity. Each weekly meeting the team will be updated as to what was completed and what we where unable to achieve, and sprint goals will be set accordingly. In the event of unmet deadlines or unexpected circumstances that prevent the progress of certain milestones, such as the absence of a team members or technical issues during the development phase, team members will create a temporary plan of action in order to ensure that progress does not fall behind schedule. This plan of action must be agreed upon by all team members before set into motion.

8. **Signature Page**

|  |  |  |  |
| --- | --- | --- | --- |
| Project Role | Name | Signature | Date |
| Head Programmer | Andrew Cobb | Andrew.cobb@georgebrown.ca | 1/14/2020 |
| Project Manager | Arsalan Farooqui | Arsalan.farooqui2@georgebrown.ca | 1/14/2020 |
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