Location Racing

Project Plan

By

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1. Introduction

This project plan contains a schedule of all of the tasks that need to be completed on order for Location Racing to be completed. Every element of the project has been noted and is displayed in a Gantt chart with the amount of time being allocated to each individual task.

The Gantt chart is a tool which allows the project to be tracked by breaking down the different tasks into specified time segments. This will help to keep the project on schedule during its development phase.

The Location Racing project is a pretty demanding project so it is crucial that the Gantt chart is adhered to in order to keep the project on schedule.

2. Proposed Project

Location Racing is a racing game which enables a player to race competitively around the real life streets of the players' location. The application will detect the player's location and automatically generate and replicate racing circuits based on the streets that surround the player's location. The player may race against either computer controlled or human controlled opponents.

3. Project Schedule

The schedule for the project is listed below. There is a Gantt chart below which outlines all of the major milestones and due dates for the Location Racing project.

3.1.Documents

The documents section contains all of the documents that are necessary at the beginning of the project.

3.1.1. Research Document

The Research Manual is necessary to all of the various technologies and platforms that are available to develop this kind of project.

3.1.2. Functional Specification

The Functional Specification is a document which describes the functionality of the project and the level of difficulty that is going to be involved in to implement the project.

3.1.3. Project Plan

The Project Plan outlines the timeline that the project must follow in order for the project to be successful.

3.1.4. Design Manual

The Design Manual is a more technical manual which will describe how the application will be used along with some diagrams to show how the user will interact with the application and some screen shots to illustrate how the project will look and feel.

3.1.5. Web Page

A Web Page must be produced so that a description of the project will be available online.

3.2.Implementation

The implementation phase of the project will use the SCRUM agile development methodology. The reason for choosing SCRUM is because it is a great way to keep focused on the individual tasks that need to be completed in order make the project a success. It also allows for changes to be made to the project without them having a big impact on the time schedule for the project.

The time allocated for the development of the project will be broken down into sprints. A sprint is a set amount of time where set amounts of task are expected to be completed. The sprint length for this project will be one week. At the end of each sprint the goal is to have a functional piece of the project working in order to demo it.

Each piece of the project that will be developed during a sprint will be a part of the final product.

3.2.1. Sprint 01

Focus on creating the GUI. This will be the first screen that the player will see upon loading the application. Also create a database on the device to store information regarding the game or the players' achievements.

3.2.2. Sprint 02
Once this is complete the application will have to determine the location of the player. This may be done either by GPS or the internet connection that the player will use.

3.2.3. Sprint 03
Fetch the correct geographical information for the area surrounding the player. Generate a file containing all of this information and parse GPS coordinates from the file.

3.2.4. Sprint 04
Convert the GPS coordinates into a format that the game engine can understand.

3.2.5. Sprint 05
Create a track based on the new format of the GPS coordinates.

3.2.6. Sprint 06
Start work on the race feature. This is the main game loop for the project. This will include drawing the car on screen and drawing the map on screen.

3.2.7. Sprint 07
Work on keeping a record of the time for the race and work on the physics aspect of the race.

3.2.8. Sprint 08
Work on the collision detection.

3.2.9. Sprint 09
Generate a route for the player to race around.

3.2.10. Sprint 10
Create a user account feature.

3.2.11. Sprint 11
Create a multiplayer feature.

3.2.12. Sprint 12
Continue the multiplayer feature.

3.3.Project Presentation
Present the project in front of peers.

3.4.User Manual
The User Manual will explain to the end user how to use that application. The User Manual will include the system requirements, the installation instructions and the system usage. The system usage will include controller settings for the game and information on how to play the game.

3.5.Project Report
The Project Report will contain information about all aspects of the project that was encountered during the project development.

It will cover any problems that were encountered while developing the project and how they were overcome.

It will document any changes that were experienced throughout the project and it will explain why the change was necessary for the project.

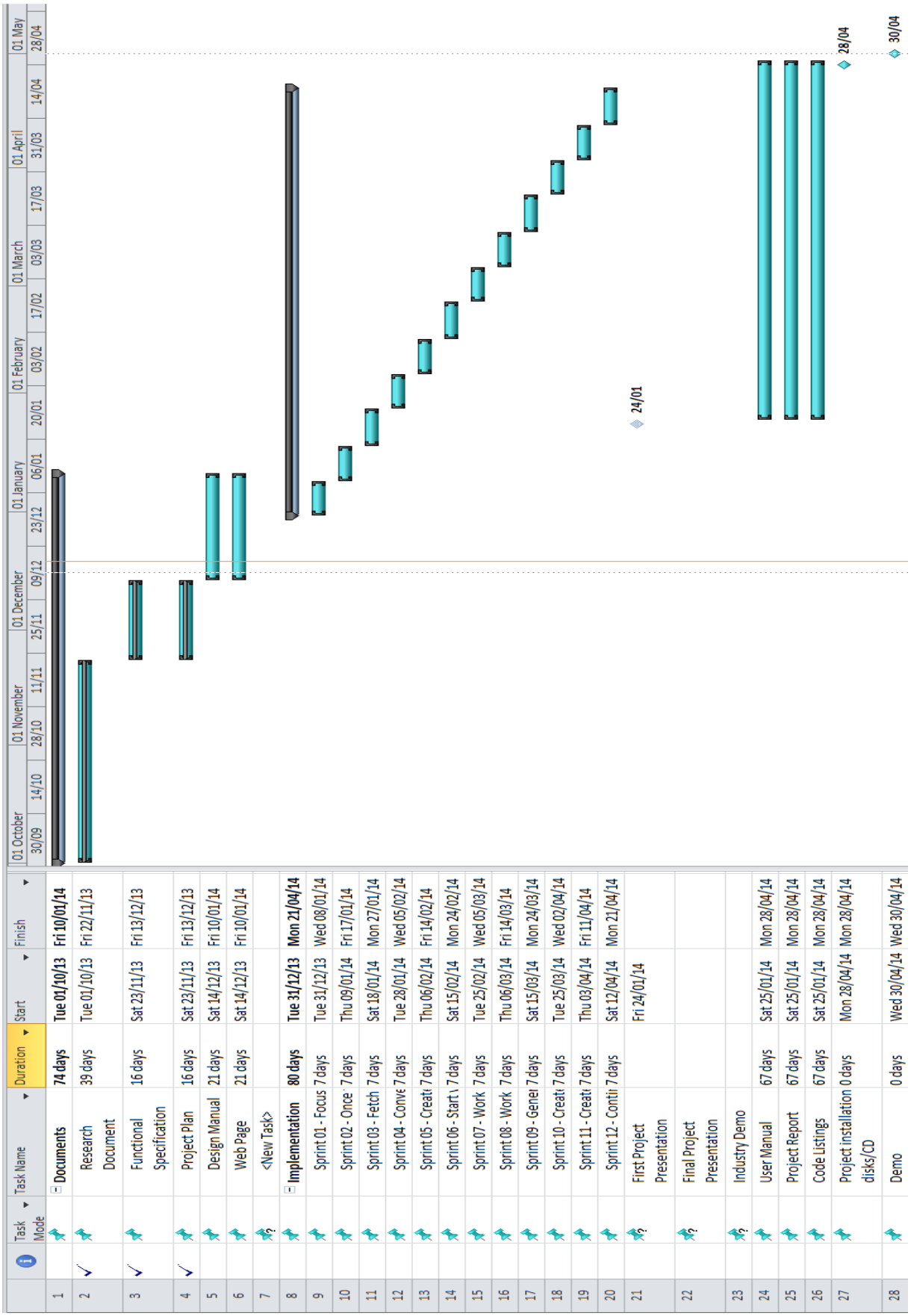
It will cover what areas of the project were completed successfully and what areas were not completed.

It will also include information on the data structures used and the methods that were used for testing.

3.6.Code Listings

The Code Listings will be provided once the project has been completed.

4. Gantt Chart



	Task Mode	Task Name	Duration	Start	Finish
1		**Documents**	**74 days**	**Tue 01/10/13**	**Fri 10/01/14**
2		Research Document	39 days	Tue 01/10/13	Fri 22/11/13
3		Functional Specification	16 days	Sat 23/11/13	Fri 13/12/13
4		Project Plan	16 days	Sat 23/11/13	Fri 13/12/13
5		Design Manual	21 days	Sat 14/12/13	Fri 10/01/14
6		Web Page	21 days	Sat 14/12/13	Fri 10/01/14
7		<New Task>			
8		**Implementation**	**80 days**	**Tue 31/12/13**	**Mon 21/04/14**
9		Sprint 01 - Focus	7 days	Tue 31/12/13	Wed 08/01/14
10		Sprint 02 - Once	7 days	Thu 09/01/14	Fri 17/01/14
11		Sprint 03 - Fetch	7 days	Sat 18/01/14	Mon 27/01/14
12		Sprint 04 - Conve	7 days	Tue 28/01/14	Wed 05/02/14
13		Sprint 05 - Creati	7 days	Thu 06/02/14	Fri 14/02/14
14		Sprint 06 - Start \	7 days	Sat 15/02/14	Mon 24/02/14
15		Sprint 07 - Work	7 days	Tue 25/02/14	Wed 05/03/14
16		Sprint 08 - Work	7 days	Thu 06/03/14	Fri 14/03/14
17		Sprint 09 - Gener	7 days	Sat 15/03/14	Mon 24/03/14
18		Sprint 10 - Creati	7 days	Tue 25/03/14	Wed 02/04/14
19		Sprint 11 - Creati	7 days	Thu 03/04/14	Fri 11/04/14
20		Sprint 12 - Contii	7 days	Sat 12/04/14	Mon 21/04/14
21		First Project Presentation		Fri 24/01/14	
22		Final Project Presentation			
23		Industry Demo			
24		User Manual	67 days	Sat 25/01/14	Mon 28/04/14
25		Project Report	67 days	Sat 25/01/14	Mon 28/04/14
26		Code Listings	67 days	Sat 25/01/14	Mon 28/04/14
27		Project installation disks/CD	0 days	Mon 28/04/14	Mon 28/04/14
28		Demo	0 days	Wed 30/04/14	Wed 30/04/14

5. Conclusion

The project can be completed if everything goes according to plan and that there aren't too many difficult complications. The advantages of using the SCRUM agile development process are that as the tasks are being implemented during the sprints they will be fully tested and they will be a finished part of the project. This will save time by not having to build and discard prototypes.

Also by implementing parts of the project separately during sprints it might be possible to make up some time on a feature that turned out to be easier than expected. This will also in turn allow more time to be allocated to a part of the project that turns out to be more difficult than it had originally been expected.