STM for games

Project Plan

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1. Introduction

The main purpose of Project Plan is to show when the specific project milestones will be accomplished, and also to help with time management. My plan is to add functionalities to the project step by step in order to produce a graph of performance at the end.

2. Requirements

Software Requirements:

- Install Visual Studio 2012
- Install Simple and Fast Multimedia Library
- Install RSTM Library
- Performance Measuring Software Algorithms

3. Project Schedule

Project Schedule below shows all the tasks and the timeline view of what needs to be done to develop this project. Iterative approach will be taken during the development of my application, there will be three main iterations:

1st Iteration

Iteration 1 will be the first iteration of the application, it will take about 36 days to complete. The finished date is on the 4th of February 2014. It's the basis for the rest of the project, so the other versions require the first one to work correctly before they can proceed.

The first iteration will contain the basic functionality associated with the project. The game board with obstacles and enemies will be implemented using SFML. The board size will have three different sizes to choose from: small, medium, and large. It should also include different STM algorithms that will be used "behind the scenes", to run the game:

- Swarming
- Flocking
- A*

2nd Iteration

Second iteration of the application will require that the first one is working correctly before it can be put into development.

Second iteration will incorporate implementing on how many processor cores will the application run: single core, 2 cores, 4 cores, or 8 cores simultaneously.

3rd Iteration

Third iteration is the final version of the application. It will incorporate performance measuring (in frames per second) under different algorithms. It will produce an output graph that shows what algorithms were used and how they performed under different conditions (board size, processor cores) using different algorithms (Swarming, Flocking, A*).

4. Gantt Chart Description

Research Report - shows the purpose of the project, its main goals, what strategy will be used. Overview of areas, technologies and topic researched, and the conclusions. It also shows the scope of the application, its deliverables and detailed algorithm descriptions.

Functional Specification - defines the application - what the product is, and what it's functionalities are. It also shows who the potential users of the app will be. Also what was the inspiration for the project topic and how does it differ from similar ones already out there.

Project Plan - explains what is the general plan for the project, also what's the general software and hardware requirements of the it. Shows the main project milestones shown on the Gantt Chart according to the dates - start and finish time. Exceptional requirements are discussed.

Design Document - shows the model of the application, and describes the use cases. It may include some high level design in order to convey how the application may be used to access its functionality. Includes screenshots of prototype user interfaces, also major architectural components and their relationship to each other, and any other elements that show how the project will function.

Web Page - one or two simple web (no Java, no Javascript) pages describing the project prepared in HTML, for placing on a web server. They should loaded onto the server as per instructions. The pages should include links (in full format) to other relevant web pages, possibly by including a section of the bibliography from your Research report.

Project Presentation - a presentation in powerpoint (or similar). It will be delivered as a short talk to the peers.

Implementation - it's one of the main phases of the project, and usually usually the longest phase in the product life cycle. In this phase coding of the software starts. I have to make sure that different components can interoperate with each other. After the first version of the application is developed, various testing is done, and code updated if necessary. Error handling is also considered as the part of Implementation phase and errors must be fixed before release of the newer version.

Project Manual - user manual will be written. The user manual should generally not present tutorial material on the project topic, but references to such material may usefully be included. The manual should include:

- System requirements
- Installation instructions
- System usage, with screenshots where needed

Final Project Report - explains problems encountered and how they were resolved, what I have and I haven't achieved, what I've learnt, also what would I do differently if I started again. Consists of report of any differences from your earlier design, and any additional research that was required. Also shows data structures and testing to assess reliability of your software product.

5. Gantt Chart