Project Plan

A software solution for a Sports Management System

Client: DuelSys Inc.

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Introduction

I am a Semester 2 Fontys ICT student and below you can find my project plan for the company DuelSys Inc. My task is to create a sports tournament management system that will deal with the tournaments, the players and the results of said to tournaments.

Current situation

At the moment, there is no digital way of recording, announcing or running tournaments for my client, DuelSys Inc. My assignment, for the rest of the semester, is to create a software, which could help with manually creating tournaments, their corresponding games and provide an easier way to display overviews of past or currently running tournaments.

Client

Throughout the development of the application, I will have no direct contact with my client, however my progress and results will be monitored by my teacher, Frank De Lepper. For the entirety of the project, I will have weekly meetings with him, during which we will be discussing my work, whether the right assumptions are made regarding functional requirements and any inquiries I may have regarding certain technical aspects of the project. Additionally, based on my teacher's feedback, I will be improving and making changes to my program in order to get as close as possible to the final result that is expected of me.

Problem Description

DuelSys Inc. is a company that wants a software solution to allow their customers (sport associations) to manage their sport tournaments. For now, the software must support a round-robin tournament system for badminton, but DuelSys Inc. also wants the software to have the potential to support other types of tournament systems and sports.

A tournament has multiple players competing in badminton games to determine who is the best (e.g. gold, silver and bronze medals). To determine this, the purpose of the software is to register all the results of each game.

This software solution will be used by sport association staff(referred to as staff) to organize tournaments and by players to find information about the tournament(s) they want to participate in.

The scalability of the system must also be taken into consideration, since DuelSys Inc. wants additional types of tournaments to be added in the future.

Project Goal

The overall and primary goal of the project is to deliver a working, bug-free, finished product that is ready-for-use from the get-go. The software architecture must be handled correctly so as to ensure code maintainability and future scalability concerns can be dealt with easily. The user experience has to be pleasant and unobtrusive by the program, which will be achieved with a simplistic design that doesn't make use of any clutter in the user interface.

Deliverables

The following deliverables will be presented by the deadline:

1. Project plan document
2. User requirements specifications document
3. A windows forms solution for the presented problem
4. UML Class Diagram
5. Website for players to register into and view their tournament results.

Non-Deliverables

The following non-deliverables will be presented by the deadline:

1. The development environment for the application(IDE)
2. Built-in support for other sport types, as per the assignment's requirements.

Constraints

There are certain constraints that I am required to follow in the development of this project.

- The system must be written in C# and it has to consist of a website and a Windows Forms application, which both get their data from a shared MySQL database.
- The WinForms is used by the staff to CRUD the sports tournaments and potentially players.
- The website is used by the players participating in the sports tournaments. They can view their profile, see a list of all the tournaments that have been played or are yet to be played and sign themselves up for one that has not yet had the maximum number of players filled in.

Phasing

My work timeline will follow an iterative approach, which will ensure easy refactoring of my codebase.

Phase I: Initial Planning:

The initial planning of the project is mainly composed of ideas for the implementation itself and serves the purpose of directing me towards choosing the most optimal solution to the presented problem, It is not part of the iterative model circle of operation, but rather a prologue to it, as it lays the foundation for the start of development.

Phase II: Analysis & Design:

Following Phase I, a rough design of the software architecture and front-end UI is created, putting the aforementioned ideas in place. The work planning is also made(in the form of this phasing plan), so as to ensure that time constraints are met. I also take into consideration the features that I ***must*** implement before the deadline and the features that are deemed auxiliary, meaning to be added if time constraints do not hinder the delivery of the final product.

As for the documentation, this document is the only one that will be updated regularly as development progresses. The feedback gathered from my tutor will be reflected here and changes will be made accordingly with precision.

Since I will be using an iterative approach, this phase, along with all of the following, are to be repeated a certain amount of times until I deem the product to be finished and ready for use.

Phase III: Implementation

The implementation itself is focused purely on the technical aspect of the project. The codebase is created(in the case of the first iteration) and in later iterations expanded upon as the product grows. If there are any assumptions to be made during this phase, I will get in touch with my tutor, so that any misunderstanding I might have is cleared up early on.

Regarding the workload, I will be developing the WinForms and the Web Project simultaneously, depending on the Functional Requirement that I am currently implementing.

Phase IV: Testing

A bug-free software implementation is a very important requirement that I hold to high standards and I am also sure every client would be inclined to do so as well, therefore I always ensure to test my business logic before deploying/turning in a finished product. Unit tests will be written to ensure both the happy-flow of the system and proper error-handling.

Phase V: Evaluation

This phase serves as a reflection upon the current iteration for phases II-IV. Having gathered all the necessary information to continue for the next iteration, some time is taken in this phase to ensure that proper Functional Requirements are implemented in the next phase, handling any bugs that might have occurred during this phase and making sure that all of the features are properly branched out in the Version Control System(GIT).

Phase VI: Deployment

Upon the end of the last iteration before handing in the finished version of the software, deployment of the Web Project will be made via the Luna FHICT Server. The database will run on Hera, so as to accommodate the Web Project and the WinForms. Additionally, all of the necessary documentation will also be handed in to my Tutor for review and grading, along with any other deliverables which are not mentioned here.

Iterative Approach Chart

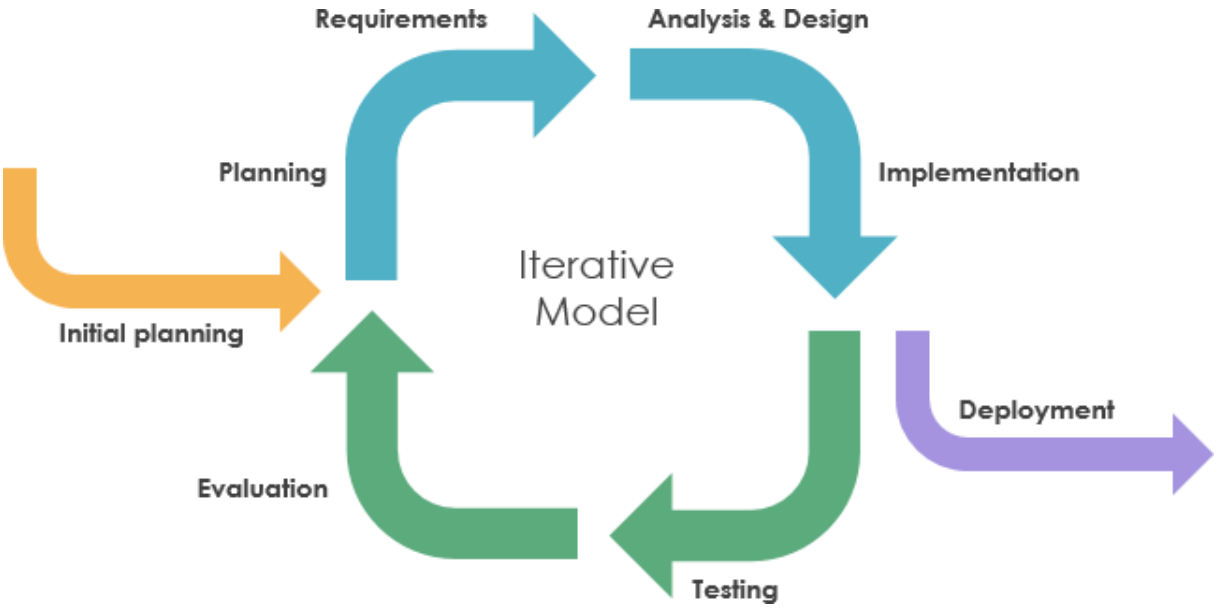

Chart provided by: ***Visual Paradigm***