

Project plan

DuelSys inc.

Synthesis Assignment

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Contents

Client Description.....	
Team Introduction.....	
Current Situation.....	
Problem Statement.....	
Project goal.....	
Deliverables and non-deliverables.....	
Project Constrains.....	
Phase planning.....	

Client Description

The client is the company DuelSys inc., which wants a software solution for managing sports tournaments. The end user of the software system is the company's customers – sports associations, also called staff.

Team Introduction

This is going to be an individual project, so the team consists of only one person. Rositsa Nikolova is a software engineering student at Fontys. She has experience with the technologies: C# - ASP.NET, HTML, CSS, and C++. She worked on similar projects both in a group and individually so she should have the skills and knowledge to develop a good software solution without any difficulties withing the deadline. You can contact her at: r.nikolova@student.fontys.nl for any questions.

Current Situation

Currently, the company DuelSys inc. does not have any solution implemented yet so the system will be created from the very beginning. Sports associations (the staff) are not able to create new tournaments and manage them. Additionally, there is no way for the sports enthusiasts to register themselves for a tournament. An overview of the tournaments with the results of the games is not available as well. In general, all activities related to managing a tournament are not possible now.

Problem Statement

Considering that the software solution is going to be implemented from the very beginning, different problems will be the priority for every iteration.

1. As a first step creating a tournament with all the required information will be implemented. This is going to be in the desktop application. Additionally, the functionality will be extended to editing and deleting a tournament.
2. Secondly, a website is going to be created where the user can register himself for a chosen sports tournament.
3. Next key step is generating the so-called schedule or the matches between the players. This is based on the tournament system (at the beginning only round-robin) that the staff have been chosen for the tournament. This will be implemented in the desktop application.
4. Another functionality of the desktop application is entering the results for the matches in the tournament by the staff. This should be based on the sport type of the tournament. For now, there will be only one sport type – badminton.

5. The last step of the core requirements is showing an overview of the tournaments with information and results on the website.

After implementing the core requirements, the focus will be on extending the software solution with additional features such as:

1. Supporting several types of tournament systems like double round-robin.
2. Generating a player's profile with general information about the player and his participations in the tournaments with ranking.

Project goal

The project goal is to be developed a software solution that allows the staff to manage the tournaments. The staff can also see the generated schedule and add the results of the matches. It should be possible for players to register for a chosen tournament and see an overview of the tournaments with additional information on the website. The basic version is also going to be extended and the system should support multiple tournament systems (for example double round-robin). On the website My Profile page will be created where personal information, participations in tournaments with ranking and the individual matches(games) played against other players will be shown.

Deliverables and non-deliverables

Deliverables for this project include documentation: Project Plan, URS (User Requirements Specification) document, Test Plan and Test Report. The software solution including unit tests and a running database are also going to be delivered. The documents are going to be updated after every iteration. Additionally, meeting agendas are going to be sent before every meeting. All core requirements will be delivered including one major and one minor requirement, but more than one major or minor requirement cannot be promised at the moment.

Project Constrains

The deadline for the project is the 10th of June which makes it 6 weeks in total. It is a hard deadline so everything should be delivered, and it should be working properly before this date. The technologies used for the back end will be C# with Windows Forms for the desktop application and ASP. Net Core Razor Pages for the web application. For the front-end – HTML, CSS and probably Bootstrap. The database must be MySQL database and it should be running on Hera server. The website should be running on Luna server. The main focus at the beginning will be on the back end and the functional requirements so the UI will be done at the end which can lead to not so good user interface design.

Phase Planning

Phase 1:

- Activities: Pre-implementation documentation
 - Activity 1.1a:
 - Reading and analysing the Synthesis Assignment Document
 - Estimated time: 20 minutes
 - Activity 1.2a:
 - Creating the Project Plan document
 - Estimated time: 1 hour
 - Activity 1.3a:
 - Creating the URS document
 - Estimated time: 1,5 hours
 - Activity 1.4a:
 - Creating UML diagram
 - Estimated time: 2 hours
 - Activity 2.1a:
 - Meeting with mentor and receiving feedback for the documents
 - Estimated time: 30 minutes
 - Activity 2.2a:
 - Updating Project Plan, URS document and UML diagram
 - Estimated time: 45 minutes
 - Activity 2.3a:
 - Updating Project Plan, URS document and UML diagram
 - Estimated time: 30 minutes
- Deliverables (Milestone 1):
 - Deliverable 1.1: Project plan document
 - Deliverable 2.1: URS document
 - Deliverable 3.1: UML diagram

Phase 2:

- Activities: Implementing core requirements
 - Activity 1.1a:
 - Implementing CRUD functionalities for tournaments in the desktop application
 - Estimated time: 3 hours
 - Activity 1.2a:
 - Creating a website with login and registration
 - Players can register themselves for a tournament
 - Estimated time: 4 hours
 - Activity 1.3a:
 - Generating the tournament schedule based on the tournament system in desktop application
 - Estimated time: 2 hours
 - Activity 1.4a:
 - Staff registering results for the matches
 - Estimated time: 3 hours
 - Activity 1.5a:
 - Showing overview of the tournaments and results on the website
 - Estimated time: 2 hours
 - Activity 2.1a:
 - Presenting the software solution to mentor and receiving feedback
 - Estimated time: 40 minutes
 - Activity 2.2a:
 - Changes to desktop application and website if needed after the feedback
 - Updating documentation if needed
 - Updating back-end part if needed
 - Estimated time: 1 hour
- Deliverables (Milestone 1):
 - Deliverable 1.1: Desktop application
 - Deliverable 2.1: Website
 - Deliverable 3.1: Updated documentation

Phase 3:

- Activities: Implementing major requirement
 - Activity 1.1a:
 - Creating the functionality for supporting different tournament systems
 - Estimated time: 2 hours
 - Activity 2.1a:
 - Presenting the current progress to mentor and receiving feedback
 - Estimated time: 40 minutes
 - Activity 2.2a:

- Changes to desktop application and website if needed after the feedback
 - Updating documentation if needed
 - Updating back-end if needed
 - Estimated time: 1 hour
- Deliverables (Milestone 1):
 - Deliverable 1.1: Desktop application
 - Deliverable 2.1: Website
 - Deliverable 3.1: Updated documentation

Phase 4:

- Activities: Implementing minor requirement
 - Activity 1.1a:
 - Creating a player's profile page on the website with general information (personal info, tournaments..., etc.)
 - Estimated time: 3 hours
 - Activity 2.1a:
 - Presenting the software solution to mentors and receiving feedback
 - Estimated time: 40 minutes
 - Activity 2.2a:
 - Changes to desktop application and website if needed after the feedback
 - Updating documentation if needed
 - Updating code if needed
 - Estimated time: 1 hour
- Deliverables (Milestone 1):
 - Deliverable 1.1: Desktop application
 - Deliverable 2.1: Website
 - Deliverable 3.1: Updated documentation

Phase 5:

- Activities: Unit tests
 - Activity 1.1a:
 - Creating unit tests
 - Estimated time: 4-5 hours
 - Activity 2.1a:
 - Creating Test plan
 - Estimated time: 1,5 hours
 - Activity 2.2a:
 - Creating Test Report

- Estimated time: 1 hour
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- Activity 2.3a:
 - Meeting with mentor and receiving feedback
 - Updating documentation if needed
 - Updating code if needed
 - Estimated time: 1 hour
- Deliverables (Milestone 1):
 - Deliverable 1.1: Desktop application
 - Deliverable 2.1: Website
 - Deliverable 3.1: Updated documentation
 - Test plan
 - Test report

Phase 6:

- Activities: Last changes and improving User Interface
 - Activity 1.1a:
 - Final changes to code
 - Estimated time: 2 hours
 - Activity 1.2a:
 - Improving User Interface on the website and desktop application
 - Estimated time: 2 hours
 - Activity 2.1a:
 - Meeting with mentor and receiving final feedback
 - Updating documentation if needed
 - Changes to code and UI if needed
 - Estimated time: 1 hour
- Deliverables (Milestone 1):
 - Deliverable 1.1: Desktop application
 - Deliverable 2.1: Website
 - Deliverable 3.1: Updated documentation

