Software Project

Project Name: Hangman

Project Manager: Adrian Babeș

Main Client: Adrian Babeș

Key Stakeholders: Adrian Babeș, the teachers in this course

Vision

With this project I aim to implement the game “Hangman”. The development will be done using java. This single player game will require the player to guess the letters of a word. The game will start with the computer reading a list of English words of various lengths from a file and choosing one of them randomly. It will later display an underscore for each letter. The player will try to guess the letters forming the word and each letter guessed correctly will replace the underscore in the word. The player has however a limited number of mistakes they can make. In this case that number will be 6 and for each mistake a body part will be drawn on the hanging post: head, body, arms and legs. The player will be assigned a score based on how fast they guess the word and how many mistakes they make. Once they have guessed a word they will have the option to continue the game and make a higher score. This will continue until the player either loses or chooses to stop playing. A ranking of players based on score will be created. The player will have the ability to ask for hints. This means that the game will tell the player a random letter that is not in the word in question. Using this feature will cause the player to suffer a penalty to their points.

Project Plan

1. Introduction

This project has the objective of creating a single player Hangman game. The game will choose a word and then the player will have to guess it letter by letter. The game will give the player an indefinite number of words for the player to guess and will end when the player either loses by making a certain number of mistakes on the same word or when they choose to stop playing.

2. Justification

The context in which this project is created is academic. Its purpose is to introduce its creator to the world of software engineering and provide a basic understanding of project planning and management.

3. Stakeholders

The stakeholders in this project will be the creator, the examiner and all teachers involved in the course.

4. Resources

The time spent working on the project, Java API, the lecture slides and recordings, the course literature

5. Requirements

The application itself will be made using java in Eclipse. UML will also be used to model certain parts of the game.

6. Project Schedule

Week 4-5 – planning the project and writing the core gameplay of the application
Week 6-8 – modeling parts of the game using UML and designing the software
Week 9-10 – testing the game and taking care of any occurring errors
Week 11-12 – adding final features and finalizing the project

7. Scope, Constraints and Assumptions

The scope of this project is to be examined as part of the Software Technology course. Its main focus lies on the planning of the project itself and the documentation, rather than on creating the game.

Iterations

1. The first iteration consists of the core gameplay of the game. It has the code for guessing the letters in a word and the winning conditions. However, it lacks the part about reading the words from a file and all of the side features which will be implemented later. It has next to no user interface.
2. This iteration will focus on designing and modelling the app using UML. It will also add more features to the game, such as reading the words from a file and everything else that was planned in the beginning.
3. The main focus will be on testing the product and making sure it works according to the plan.
4. This iteration will focus on refining the game and the already added features in order to create the final version of the program. Additional features may be implemented.

Risk Analysis

1. **List of risks**
   One of the risks this project is exposed to, is a change of requirements over its lifetime. The probability of this happening is fairly high, as the purpose of this project is to get used to the world of software engineering. Such a change is to be expected, as examiners might introduce it in order to see how students would manage such a situation. The effects of this would be moderate to high, depending on the scale of the changes.
   Another risk is that due to health problems or because of other projects I will not be able to work towards achieving the goals set for this project. The probability is low, but the effects would be catastrophic.
   There is also the risk of underestimating the size of the software. The probability of this is low, as the application in question is relatively simple and there aren't many reasons for its size to increase in such a way.
2. **Strategies**
   One strategy that will minimize the negative effects of these risks is to start working in advance to make sure that these obstacles and delays do not render the project impossible to finish on time.

Time log

04.02.2019 – 2 hours – planning
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06.02.2019 – 1 hour – witting the skeleton code
07.02.2019 – 1 hour – revising the assignment