HANGMAN DEVELOPMENT PROJECT

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CONTENTS

1. REVISION HISTORY

Date	Version	Description	Author
190207	**1.0**	**First edition**	**fl222pw**

2. GENERAL INFORMATION

Project Summary	
Project Name	**Project ID**
Hangman	**fl222pw_1dv600**
Project Manager	**Main Client**
Fredrik Langå	**Linnaeus University**
Key Stakeholders	
Project Manager: me	
Developer: me	
End-User: me	
Executive Summary	
Creation of the game Hangman, playable in the terminal with ascii-style graphics.	
Creation involves planning, designing, implementing and testing of software.	

3. VISION

A game is to be made. A game of guessing, wit, with intriguing suspense where any missteps have consequences, making each successive guess all the more difficult to make.

We are to create the game *Hangman,* working in the terminal window and with ascii-style graphics. It's not a ground-breaking idea for a game, but it is an old and proven way of entertainment, and if you can get the basics right everyone can enjoy it. Hangman is a game of guesses, where guessing the correct word without giving a wrong guess too many times saves a digital person's life. Of course, the stakes aren't really that high, but it lends credence to wanting to give the correct answer while also keeping guesses to a minimum, keeping a competitive edge!

Reflection

Writing a vision was a bit harder than expected. To "inspire" other people reading this document and vision I thought a bit of humour and exaggeration to start with might help. I also hoped it would inspire me to help me write the vision itself. It is also quite difficult to describe a project like Hangman in terms to help with inspiring people to want do make it, but at the same time a lot of what we are going to do in our professional lives are probably not going to be a super-exciting project after another.

4. PROJECT PLAN

4.1 Introduction

The purpose of this project is to create the game *Hangman* working in the terminal window/command prompt and with ascii-graphics, with user-input from the terminal. In Hangman, the game takes a random word from a pool of words, where the user is supposed to guess which letters the word contains. The amount of guesses the user gets is made up of how many parts to the hanging pole and the character.

4.2 Justification

This application has been requested by the teachers of the course 1dv600 as a means to learn the ins and outs of planning, designing, developing and testing a bigger type of project.

4.3 Stakeholders

Manager; which is me, planning the project and makes sure deadlines are met.

Developer; which is me, designs and develops the features of the game.

User; which is me, has expectations on the delivered program.

4.4 Resources

Development will be done with Visual Studio Code as IDE, using JavaScript as the programming language and running server-side using Node.js.

People-resources are extremely limited; project planning, designing, developing and testing is done by one person with limited time due to other factors involving the course, for example lectures and reading course literature.

Little to no money available, and a small timeframe to completion.

4.5 Hard- and Software requirements

Computer, access to terminal/command prompt, Node.js installed, ability to install node modules, familiarity with command-line use.

4.6 Overall Project Schedule

Week	Theme	Deadline
4		
5	**Process**	
6	**Model**	**Assignment 1**
7	**UML**	
8	**Design**	**Assignment 2**
9	**Test Plan**	
10	**Test**	**Assignment 3**
11	**Project**	**Present git-repo**
12	**Project**	**Hand in project**

4.7 Scope, Constraints and Assumptions

4.7.1 Scope

- Menu with user-input from keyboard.
- Menu containing "Play game" represented by "p", "High score" represented by "h", "Quit" represented by "q".
- The user has nine guesses, with each guess representing, in order, the vertical pole, horizontal pole, noose, head, body, left arm, right arm, left leg and right leg.
- The word to be guessed displayed as "_" for each letter.
- Each wrong guess to write the corresponding graphic to the terminal.
- Each correct guess to replace "_" with the letter in the correct position of the word to be guessed.
- On correct word display the full word and give the user options to "Play again", "high score" and "quit".

4.7.2 Constraints

- Small timeframe to complete necessary documentation and development.
- Only one person acting as project manager, developer and end-user.
- How to store high score. Cookies? Local Storage?
- Implementing necessary functions to be re-playable.
- Local or online word database?

4.7.3 Assumptions

- The user to have some degree of computer knowledge.
- The user to have the ability to install necessary applications and packages.
- That the time left is enough to complete the assignment.

Reflection

The project plan I thought was quite difficult to write. I haven't thought about planning in this way and amount of detail before, so it was quite a challenge. Still, I think it gives a good idea how it is when working professionally, albeit in a much smaller scope. I still feel I'm missing some ideas and will probably add things I didn't think about to the project plan as we get deeper in the course and iterations. It feels like a good learning experience to get more structured in the way I approach new projects.

5. ITERATIONS

5.1 Iteration 1

Objective	Est. Hrs
Reading of course literature chapter 2, 3, 22 and 23	10
Viewing of online lectures	4
Course lectures on campus	6
Creation of repository on GitHub	1
Writing Vision document	3
Writing Project Plan	6
Writing Iterations	4
Writing Risk Analysis	2
Filling in Time Log	2
Writing reflections	2
Total time Estimate	40

5.2 Iteration 2

Objective	Est. Hrs
Reading of course literature chapter 4, 5, 6, 7, 15 and 20	20
Viewing of online lectures	4
Course lectures on campus	8
Design Features to Hangman	2
Implement features to Hangman	10
Developing project plan	4
Total time Estimate	48

5.3 Iteration 3

Objective	Est. Hrs
Reading of course literature chapter 8	2
Viewing of online lectures	6
Course lectures on campus	8
Add additional features	10
Create test	4
Plan perform and document tests	15
Total time Estimate	45

5.4 Iteration 4

Objective	Est. Hrs
Course lectures on campus	4
Reiterate 1-3	20
Total time Estimate	24

6. RISK ANALYSIS

6.1 List of risks

Risk	Probability	Effect
Illness	High	serious
Computer breakdown	Low (jinx)	catastrophic
Requirements change	high	tolerable
Underestimate size of project	high	serious

6.2 Strategies

Illness

Due to a medical condition leading to a lowered immune system, the probability of illness is unfortunately high. By being careful of hygiene in public places, washing hands and using rubbing alcohol the chances are at least lowered, but not unavoidable.

Computer breakdown

Always keep backups, push changes to repo.

Requirements change

Due to the nature of this project, requirements will be added or removed in future iterations. Should not pose a problem to the deliverance of the project.

Underestimate size of project

Stay on schedule, do what I can to get the required information and stay on targeted delivery date. Remove lesser functions if necessary.

7. TIME LOG

Iteration 1.

Activity	Est. time	Date	Effective time
Reading of chapter 2, 3	4	190126	5*
Reading of chapter 22, 23	6	190129	7*
Viewing of online lectures	4	190125	7*
Course lectures on campus	4	190123	4
Creation of repository on GitHub	1	190129	0.5*
Writing of Project document	19	190208	24*
Total Effective Time			47.5

Effective time differences

Due to not being prepared for the amount of reading required, I had to go back and read certain chapters and parts of chapters several times. This was also true for the online lectures, where I felt thrown into the deep end and had to rewind and watch some parts again.

Creating the repository did not create any problems and went smoothly.

Writing of this document took more time than I thought. This also probably had a lot to do with not being prepared enough to tackle a project of this size.

The estimated time taken and effective time could be a lot more specified; this was because I did not take in enough of the information on the course page before I started certain tasks. For the next iterations I will take more care into estimating time and also timing myself during the iteration steps.