
HANGMAN

Berk Can BALATACI

Linnaeus University (Erasmus Exchange Student)

16.04.2019

| Contents

1	Revision History	3
2	General Information	4
3	Vision	5
4	Project Plan	6
4.1	Introduction	6
4.2	Justification	6
4.3	Stakeholders	6
4.4	Resources	7
4.5	Hard- and Software Requirements	7
4.6	Overall Project Schedule	8
4.7	Scope, Constraints and Assumptions	8
5	Iterations	10
5.1	Iteration 1	10
5.2	Iteration 2	10
5.3	Iteration 3	11
5.4	Iteration 4	11
6	Risk Analysis	12
6.1	List of risks	12
6.2	Strategies	12
7	Time log	14
8	Handing in	15

1 | Revision History

Date	Version	Description	Author
08.02.2019	1.0	Project plan and Skeleton codes are published.	Berk Can BALATACI
22.02.2019	1.1	UML diagrams, time log and codes of playable version of Hangman are published.	Berk Can BALATACI
08.03.2019	1.2	Manual test-cases, unit test-case classes and results are published.	Berk Can BALATACI
16.04.2019	1.3	Several parts are updated: <ul style="list-style-type: none">• General Information• Project Plan• Risk Analysis• Time Log	Berk Can BALATACI

2 | General Information

Project Summary	
Project Name	Project ID
Hangman	bb222ji_1DV600
Project Manager	Main Client
Berk Can BALATACI	English Vocabulary Enthusiasts
Key Stakeholders	
Project Manager Software Architect Software Developer End users	
Executive Summary	
<p>The Hangman Game project is a terminal based application that can run on any personal computer. The game comprises of guessing letters of a hidden word where each correct guess reveals the letter in the word. An incorrect guess adds a part to man being hanged. The game ends if all parts of the man hanged or all letters are guessed. The project is being developed in order to make people fun and discover & increase their English vocabulary knowledge at the same time.</p>	

3 | Vision

The Hangman Game is a text based fun game such that people of all ages want to play it. Players can race between other players who are played on the same computer and also they can learn new words and definitions.

When the program runs, the player will be welcomed with a menu that have choices like start the game, look at the high score list, add a new word to game's dictionary. If he/she selects the start choice than name of the player will be asked and then game will start. At the beginning of the game, a word from a predefined dictionary is randomly be picked and the underline signs is displayed as the number of letters of the word. Then player tries to guess the word by suggesting letter after letter. Players have fixed wrong prediction limit. After a round is finished, system can display the definition of the word if user wants to see.

Reflections: *First time for me to write a vision of a project. So I am not sure that if I mention what is the application about or how can I give a motivation to stakeholders of the project. At first paragraph, I give few motivation information about game that include important features may differ from other competitive games. At second paragraph, I mention what is the program about and how will it look after the project is finished.*

4 | Project Plan

4.1 Introduction

The project is about creating a well-known Hangman game with plan-driven approach. The application will be a terminal based application that can run on any personal computer.

4.2 Justification

This game will entertain people while they are learning new words and their definitions. Moreover, people can race with their friends as the application will have a high score list.

4.3 Stakeholders

Project Manager -- The person responsible for the project team. Project Manager wants to see that the project plan is followed by team and the application will be delivered before deadline.

Software Architect -- The person responsible for analyzing, design and modelling. This person will design UML Diagrams to model Project features.

Software Developer -- The person responsible for implementation and testing. Developer will implement all required features. This person wants to write well structured code for better understandability, changeability, testability.

End user -- The person knows how to play terminal based Hangman game. End user can suggest which features are fun or useful and after end of development this person can make comments about the game.

4 | Project Plan

4.4 Resources

- A computer which has Intel i7 Processor, 8GB Ram and Windows 10 Operating System are used to create the application.
- The program is coded in Java language with Eclipse IDE.
- GitHub is used for version control and storing documents.
- Draw.io is used for drawing diagrams.
- Project will take 50 days to end.
- 1 employee works on this project. In this way, project manager, software architect and software developer will be the same person.
- It will cost 0 SEK as the employee works on this project voluntarily for educational purposes.

4.5 Hardware and Software Requirements

Hardware

- A working computer that can run Java Virtual Machine.
- Mouse and keyboard.

Software

- An operating system which Java 8 or higher is installed.

4 | Project Plan

4.6 Overall Project Schedule

Deadlines

- Start --- 01.02.2019
- Planning Phase End --- 08.02.2019 (Iteration 1)
- Design Phase End --- 21.02.2019 (Iteration 2)
- Implement & Test Phase End --- 08.03.2019 (Iteration 3)
- Complete Project --- 18.04.2019 (Iteration 4)

4.7 Scope, Constraints and Assumptions

Scope: The game is only in English language, the game keeps names, passwords and scores of players and definition of words as txt files. The application is implemented and tested in Windows.

Out of Scope: The application does not have a graphical user interface as it is a terminal based application. This is because developer lacks of knowledge about it. Because of the fact that this application only tried with Windows, it may cause a problem in other Operating Systems.

Constraints: Time was limited. There is only 1 employee works on this project. Developer lacks of knowledge to code a Graphical User Interface in Java. The game runs in a terminal environment. The application must be fast and easy to play.

Assumption: Users must have Java8 or later and they must read installing instructions on GitHub readme file.

4 | Project Plan

Reflections: *At first, some of the parts of Project Plan that I have to write about was not clear for me. After a couple of searches, I think I understand most of the parts but I am not sure if I write enough information about Scope, Constraints and Assumptions of the Project. As I don't know how can I calculate what is minimum system requirements to run this game, I could not write exact amount of ram, gpu, etc.*

5 | Iterations

This project consists of 4 iterations as below.

5.1 Iteration 1

In this iteration Project Plan was built. Several General Information about project was reported. Vision of the project was determined. A Project Plan was established. Some skeleton code was implemented. A GitHub repo was opened and both Project Plan and Skeleton code are released.

Estimated times :	Write Vision	1:00
	Write Project Plan	3:00
	Analyze Iterations	4:00
	List Risks & Strategies to Avoid them	1:00
	Start coding (Skeleton code)	2:00
	Create a repo and upload project plan	0:30

5.2 Iteration2

In this iteration, Project features will be modelled using Unified Modelling Language (UML). The result diagrams of this iteration will be added to the project documentation. Thanks to these diagrams, the application will be implemented in the way modelled. End of this iteration there will be a playable version of the game in a basic style.

Estimated times :	Design UML Diagrams	6:00
	Upload Document	0:30
	Implement Basic Game	8:30

5.3 Iteration 3

In this iteration, some additional features will be included as displaying high score list, registration to system with name and password, displaying definition of the word, adding new words to dictionary. Then the program tests will be planed, performed and results will be documented.

Estimated times:	Add Features	8:30
	Plan Tests	0:30
	Perform Tests	4:00
	Upload Document	0:30

5.4 Iteration 4

In this iteration, the complete game will be the outcome. The steps in iteration 1,2 and 3 will be reiterated for new features and project will be considered as a whole.

Estimated times:	Reiterate Step 1,2,3	5:00
	Upload Document	0:30

6 | Risk Analysis

6.1 List of risks

- 1) Developer may not have enough skills required for implementation.
(Probability: Low) (Impact: Serious)
- 2) Project does not meet its requirements.
(Probability: Medium) (Impact: Serious)
- 3) The time required to develop the application can be underestimated. This may project can't be completed before the deadline.
(Probability: Medium) (Impact: Catastrophic)
- 4) Hardware crashes.
(Probability: Low) (Impact: Catastrophic)

6.2 Strategies

- 1) Developer must plan time to train required skills. Features which are impossible to implement should be removed.
- 2) Specified requirements should be understood completely. Before project completed, each iteration must be re-iterated.
- 3) Employees may work more hours than estimated if iterations is behind schedule and if deadlines are passed then there is no other solution except asking client for more time.
- 4) Project files should be uploaded to GitHub frequently and hardware should be maintained regularly. If the hardware break then it should be repaired as soon as possible as there is 1 computer as resource.

Reflections: *I think Risk Analysis is a bit hard for me to do for this project. Because this was first time for me to document risks about a project. At first, I wrote some functionalities in the game like "A person can play by typing another player's name. " that I thought they are project risks but then I learned they are not project risks so I removed them.*

7 | Time log

Job	Time Spent	Estimated
Write Vision	1:30	1:00
Write Project Plan	4:15	3:00
Analyze Iterations	2:45	4:00
List Risks & Strategies to Avoid them	0:45	1:00
Start coding (Skeleton code)	1:00	2:00
Create a repo and upload project plan with skeleton code	0:15	0:30
Update some parts: <ul style="list-style-type: none">• General Information• Project Plan• Risk Analysis• Time Log	4:00	3:30

Comments: Writing vision and project plan took more time than I estimated. Because they both are important parts for this project documents and I spent too much time on brainstorming as I did not know what to mention as it was first time for me to do.

8 | **Handing in**

GitHub url: https://github.com/berkbltc/bb222ji_1dv600/releases