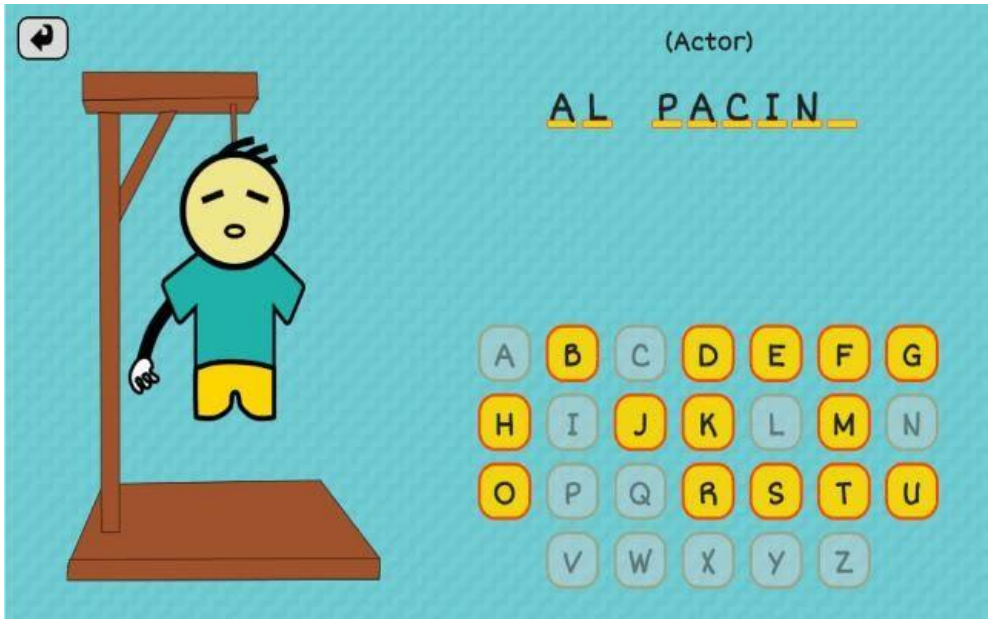
Linnéuniversitetet

Hangman Project



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1. Revision History

Date	Version	Description	Author
2021-08-01	**1.0**	Project plan In the first iteration, it will create different task such as: (Vision, Project plan, Risk analysis, Strategies, Writing the skeleton of the Hangman game)	Yetnayet Edeglign Belachew

2. General Information

Project Summary	
Project Name	Project ID
Hangman Game	
Project Manager	Main Client
Yetnayet Belachew	Linnaeus University
Key Stakeholders	
Players **Developer/ Designers** **Customers** **Project Manager**	
Executive Summary	
Hangman is a guessing game that gives the players some attempts to guess the right letters to get the right words in the end if the player loses all his/her attempts he\she will be hanged. It could focus on marketing to investors and buyers. The game has rules and conditions. The game is played by one player and it is a simple game. The game runs smoothly with no bugs to attract the buyer and discovered what people liked about games and then made advertisements.	

3. Vision

Hangman is a very popular game, so it can be created by different programming languages such as C++, Java, Python, JavaScript, etc. I am going to use Java language to create the hangman game in this project. The project aims to create and develop a Hangman game. Hangman game where a player can guess words. This game is common for most people and it comes to challenge our knowledge of choosing a word category. Most of us may know the principle of the Hangman game.

The game should be able to run and ask a player to start the game by provide a number to choose the level of the game and ask him/her to enter different letters however, the hanged man image will be displayed the body for each wrong attempt. When the player starts playing the game will provide the player with three options first one is to play an easy game by providing the player 7 attempts to guess the correct letter other, the second option by choosing medium game by providing the player 5 attempts for guessing the word, and the third option by providing the player 3 attempts for guessing the word.

The words, of course, will be randomly from the list in the program. The concept of the game is when the player guesses the correct letter, the letter will be shown in the display like this ---b--- or if the letter is repeated it will display on the screen both repeated letters like this ---ee---. If the player guessed the correct word before he loses all his attempts player will win then survive otherwise the complete image of the hangman will be displayed, it means man dies and be hanged.

Personal Reflection:

The creation of a hangman game is to improve the skills and test of programming at the same time. In the beginning, the processing of the hangman game was unclear such as vision, justification, scope, and other things because it was a new thing for me, but it became clear when I intended the lectures and kept asking and I found some information on the internet. However, there were some difficulties along the way. Due to the shortage of time and busy with another subject, so that was not easy for me and because I didn't get to use to do a project like that since I was unfamiliar with that processing, but I tried to cover all the necessary stuff and features in this humble project.

4. Project Plan

The developer aims to create a game called hangman to challenge the player to guess some letters from specific words. Once the player has started the game, the screen will display a message and ask the user to enter a username for playing the game.

When the user has chosen a username for playing the game, the second menu will indicate the game difficulty (Game levels) will be shown to the user. That is the user has the possibility to play the game with easy level (7attempts), Medium (5 attempts), and Hard (3 attempts). There is also an option for quitting the game at this stage.

When the user has chosen the level of the game, it will be the time to choose the Game category. That is for making this game interesting, the player can play the game based on different words. The user can choose the words from name of the countries (10 different words) and car brands (11 different words). As usual, the player can also quit the game like the Game level stage.

When the player has chosen both game level and category, it is finally the time for the player to play the game. The result of the game depends on the player. That is the player either is going to win or lose. in both cases, the player will be given a chance to restart the game or quit the game. However, while playing the game, the player can stop playing the game by pressing *. Also, when the user has chosen the wrong character, a picture of the hangman will be displayed that will complete eventually by each wrong guess.

Project plan Reflection:

If the time permits, there is a possibility that more exciting features take a place in the game for example limiting the user with a timer to choose the missing letters or add graphical features to the game or even create the game by using JavaFX.
As I have mentioned before, the project can become challenging for someone who has no previous knowledge about this kind of project and to create a perfect project which requires knowledge in both programming and planning. If I had previous knowledge in programming and planning, it would be better and easier to create a better project and add more features.

4.1 Introduction

Hangman is a game which will be updated through four iterations the first iteration for planning the second on is modeling, the third iteration is doing testing for the program and the last iteration is the last If the player guessed the right word, he\she wins if he didn’t, he/she will lose and be hanged.

4.2 Justification

The main objective of creating the Hangman game is to divide the task into a smaller part that can be easier to handle it or to deal with. It could be also made to make children play and get more knowledge and teach them new words like country names, food, animal, and more things. It could be also made to get some benefits from it by putting advertisements on it.

4.3 Stakeholders

Players: who will play the game, or we can say the user who is given few chances to guess the correct word.

Developer/ Designers: People who designed the Hangman game, testing the code, and add more features to the game.

Customers: Those people who buy the product and get benefits from it like put advertisements on it or something else.

Project Manager: who is responsible for the plan of the project.

4.4 Resources

Software engineering book 10th Edition, Literature, Manpower, available time, and internet. etc.

4.5 Hard- and Software Requirements

Hardware: computer with basic requirements

Software: Java, JDK, and Eclipse which we use it when we run the program which has JVM and runs time, Eclipse program, Internet.

4.6 Overall Project Schedule

The first assignment is: 2022 ------> Documentation

The second assignment is: 2022 -------> using UML for modeling

The third assignment is: 2022----------> Test

The fourth assignment is 2022 ----------> to complete the final step on the project and add a new feature

4.7 Scope, Constraints and Assumptions

The scope is the project main goal of implementation of the Hangman game in java. It is a playable game which means that we are going to use Eclipse, so we are not going to design the game, it is just a console application. This game only focuses on one player, not more.

Constraints: It is the executable operation in a terminal or console and man should have a computer to run the game.
Assumption: It just assuming that users know to deal with the game. Users should know the basics of the Hang Man game like to run it and understating how to install it etc.…

My game is going to be simple and smooth. My game also is going to give the player some attempts to guess the correct letters and show him the right letters until the player can get the correct word.

5. Iterations

5.1 Iteration 1

It is the first iteration the objects and their state and behavior were implemented, most of which, were based on the project plan such as, number of attempts, restart the game etc. The idea of this iteration was to implement the useful objects and methods based on the project plan. Therefore, in the upcoming iterations the functionality of the objects will become clear.

Subject	Estimated time	Real-time	Start Date	Finish Date
General Information	20 minutes	20 minutes	2020	2022
Vision	40 minutes	2 hours	2020	2022
Project plan	3 hours	5 hours	2020	2022
Iteration	1,5	2.5	2020	2022
Risk Analysis	50 minutes	50 minutes	2020	2022
Code	40 minutes	30 minutes	2020	2022

5.2 Iteration 2

The second iteration is the modeling and UML iteration, I will mention that in assignment 2

5.3 Iteration 3

Creation of test cases that can help the developer to evaluate the game.

5.4 Iteration 4

Adding new features and this is the last iteration that means the game will be ready to hand into the client with all necessary implementations.

6. Risk Analysis

6.1 List of risks

Most projects or programs face risks with code itself or between units, by identifying the risk it could be easier to reduce the risk overall the project. We can say that risk is an expectation of loss information. Risk is something that you would prefer not to have happened. Risks may threaten the project from hacking the software that is being developed. There are some of the risks we mush to focus on them**:**

-Lack of new ideas and experience.
-Losing data.
-late delivery for project short time to delivery or to update the project.
-Unexpected risk like a system failure.

6.2 Strategies

For success in any project, it should start with good strategies, a good plan must be created and divides the task into parts so that it can discover or find if something wrong happened in the project or program and that makes it easier to find the problems and fix it. We should think about some strategies like:

- Backup the system: this is the important operation to you keep a copy of the system project and that step can keep you secure from the following list under:
- Protect the project
- System failure
- Viruses issue

6.3 Reflections

I have learned many things from this project especially from this assignment. I have learned to make a good plane before I start any project and divide the project into the part until I can find the problem or the risk and fix it or terminate it. Good Strategies come with good experience and knowledge. I think the project that I am working on it, it is not hard, it is easy to understand. I have learned also how to expect the risk and be ready for it, and how to make a plan to face the risk by doing backup for the project and reduce the risk by doing risk analysis to make the project successful.

Time log

Subject	Estimated time	Real-time	Analysis	Deadline
Iteration 1	3 days	2 days	I spent more time especially on the project plan, vision, risk analysis, reflection, and Justification, it took time for me to write assumptions, Scope, Constraints, and Assumptions because I was new for this stuff…	
Iteration 2				
Iteration 3				
Iteration 4				

Handing in

All assignments have some files to hand in. The overall advice is to *keep it simple*. Make it easy for the receiver to understand what the files are by using *descriptive* file names. Use as *few* separate documents as possible. Always provide a *context*, that does *not* send some diagrams in "graphics format", but always in a document where you provide the purpose and meaning of the diagrams. Remember that the "receiver" is a customer and as such has very little knowledge of the diagrams and documents – always provide context that makes anything you hand in understandable to a nontechnical person.

To hand in an assignment, make a git release and hand in the link via Moodle to that release.