

**Project name:** Who wants to be a millionaire

**Due date:** 07.06.2019

### **Introduction**

##### **1.1 Purpose**

This document describes general Software Requirements Specification for the “*Who wants to be a millionaire*” project that is to be implemented till the end of *Java Fundamentals* course at Tekwill.

The document will serve as a requirements base for the student. Furthermore requirements and details will be identified, discussed and agreed on in an Agile development method.

##### **1.2 General Description**

The project that is to be implemented during this course aims to create a Java application that would simulate the well known game *Who wants to be a millionaire*.

Main features of the application are as follows:

* Play a game by answering to questions and getting an increase of the score whenever the user chooses the correct answer.
* During the game, the user has 3 help options: *Ask the Audience*, *Phone a Friend* and *50-50*.
* End the game as soon as the user chooses a wrong answer.
* Every questions has a score, a certain amount of points that will be added to the score once the player has correctly answered the question.
* A game must have at minimum 5 levels, meaning there will be five questions to answer, one per each level. The questions that belong to the same level, have the same score.

From technical point of view, the application will represent a Java console application.

The necessary data for this application to work will be stored in memory.

##### **Source Code**

Delivered source code should be of high quality, easy maintainable, tested and documented. All the source code will be open source.

Project should be versioned using Git and hosted on GitHub. High quality code documentation is a must.

1. **Functional Requirements**

Below is a list of User Stories and the acceptance criteria every of them must cover:

1. As a player, I want to enter my name at the beginning of the game, so that the score could be assigned to me.
   1. At the beginning of the game, the player is asked to enter his name.
2. As a user, I want to start a game, so that I could have some fun.
   1. The game is automatically started once the application is up and running.
   2. The game can be restarted if the player wants to do so, after the previous game ends.
3. As a player, I want to answer to questions by entering a number from 1-4 interval.
   1. The player can answer a question by entering a digit from 1 to 4 interval, the digit referring to the index of the answer.
4. As a player, I want the questions to be randomly selected when I start a new game, so that I won’t have to answer the same questions again.
   1. Every question has a score, certain amount of points that would be added to the player’s score once he chooses the correct answer. Depending on their value, the questions are “grouped” by level, so that certain questions can be displayed to the player when he’s at the first level, some other questions are displayed when he’s at the second level and so on. When it comes to select a questions to display to the user, use the Random class to randomly select a question from those questions that are allowed to be displayed at the current level.
5. As a player, I want to have the “*Ask the Audience”* help option, so that I could use some help when having doubts answering a question.
   1. During the game, when the player is supposed to choose an answer, it can enter the character “a” instead, which will trigger the “*Ask the Audience”* help option. As consequence the player will see at the console the percentage distributed by answers, e.g. answer1 - 25%, answer2 - 17%, answer3 - 45%, answer4 - 13%. So, the player can assume that the correct answer would be the third one. The answer that has more percentage must be the correct one.
6. As a player, I want to have the “*Phone a Friend”* help option, so that I could use some help when having doubts answering a question.
   1. During the game, when the player is supposed to choose an answer, it can enter the character “p” instead, which will trigger the “*Phone a Friend”* help option. As consequence the player will see at the console the potential answer to the current question. Let’s assume this option will always return the correct answer.
7. As a player, I want to have the “*50/50”* help option, so that I could use some help when having doubts answering a question.
   1. During the game, when the player is supposed to choose an answer, it can enter the character “f” instead, which will trigger the “*50/50”* help option. As consequence the player will see at the console the 2 potential answers to the current question. One of them must be the correct one.
8. As a player, I want the score of the game to increase after each correct answered question, so that I could see the progress of the game.
   1. Every question has to have a score, a certain amount of points that the player will get once he correctly answered it.
9. As a player, I want to see the score of the game after each correctly answered question, so that I could be aware of my progress.
   1. The score of the game is displayed before showing the next question.
10. As a player, I want to see a congratulation message at the end of the game, if I successfully managed to answer all questions, so that I could feel happy.
    1. The congratulation message is displayed at the console.
11. As a player, I want to see an encouraging message at the end of the game, if I didn’t manage to win it, so that I won’t feel disappointed.
    1. The encouraging message is displayed at the console.

#### **Non Functional Requirements**

1. Checkout if it is possible to display the text at the console in different colors, so that it could be possible to differentiate the steps while playing.