Software Requirements Specification

for

Interactive Student Life

Version 1.0

Prepared by
Georgi Hristov(253909)
Ewa Nikodem(254006)
Ivaylo Tsvetkov(253964)

ICT Engineering – VIA UC

April 28, 2019

Table of Contents

Revision History

Date	Changes	Version
28/01/2019	First Draft	1.0
13/03/2018	Front page, More detailed explanation of the project. Testing strategies	2.0
05/04/2018	Choice of model and method, Problem Formulation, Delimitation, Time schedule	2.1
10/04/2018	Detailed time schedule, Include milestone. Story improved	2.2
28/04/2018	Changed the whole structure of the documentation, added requirements.	3.0
02/05/2018	Added product perspective diagram.	

m

1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of the software requirements for the project ***Interactive Student Life.*** The document explain purpose, features of the software, as well as what it will do.

1.2 Document Conventions

The document was created by following the IEEE 830 Requirement Specification Standards and is based on the IEEE template for System Requirement Specification Documents.

1.3 Intended Audience and Reading Suggestions

The main target audience of this document is the development team, the supervisor or any external company/person who would help with the further development process.

1.4 Product Scope

Interactive Student Life is an interactive movie made in VR environment, aimed for 18+ years old audience. The project is going to be entertaining with challenging mini games. The interactive movie gives a chance to the viewer to become part of the movie. In the project the viewer will take interactive decisions which will affect the life of the main character. Main character is a first year student in the university and has a whole student life ahead of him.
The viewer makes decisions which will affect the storyline of the young adult. Whenever the viewer has to take the decisions there would be points which are not going to be visible for the user.. In some cases, the same story can be reached by different ways, but will present the viewer with different choices based on their decisions till this moment. Some endings may become impossible to reach based on choices made by the viewer, unless they decided to go back after they reach an ending.

1.5 References

Georgi Hristov, Ewa Nikodem, Ivaylo Tsvetkov “Project description – Interactive Student Life”, April 2019

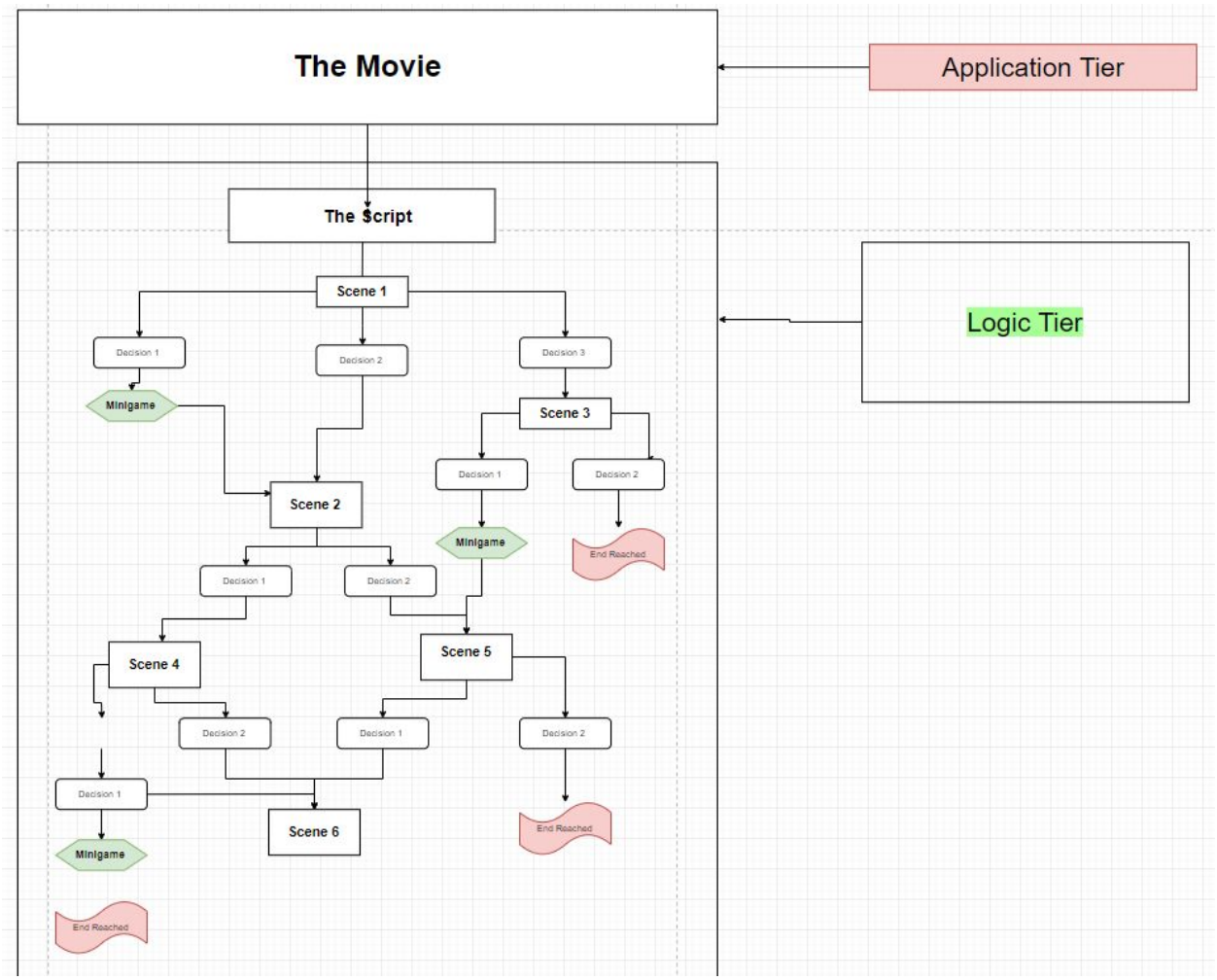
Samsung au. (2019). *Gear VR: Safety and Health precautions | Samsung Support Australia*. [online] Available at: https://www.samsung.com/au/support/mobile-devices/gear-vr-safety-and-health-precautions/

2. Overall Description

2.1 Product Perspective

Student Interactive Life is a new self-contained project. It is not a follow-up member of a product family, neither it is a replacement for already existing system.

The diagram below shows the two layers of the system, the first application layer contains the view and all the interfaces. The Logic layer contains all the logic between the scenes featuring the mini games which are small programmed games which the viewer will play in order to gain some extra points.



The first scene will be like an introduction for the user, the beginning of the scene will be held in the front of the VIA University. In this scene the user will get a brief information about where he is and what he can do. In this scene

2.2 Product Functions

Interactive Student Life is an interactive video targeted at people over 18 years old and it is designed in such a way that it does not require any specific knowledge about VR applications. The game provides user with a video that you can interact with. User guide a student through some part of his student life and makes decisions for him. The video also contains few minigames inside it. The ending depends on the choices user made earlier on. The game will not require the user to log in.

2.3 User Classes and Characteristics

The game is addressed for everyone over 18 years old. The game is not suitable for anyone under 18 years old, as it contains inappropriate content for younger users, such as drinking alcohol.
The game is meant for everyone, as it does not require any specific knowledge or higher education.

2.4 Operating Environment

The project requires a Samsung phone (*Galaxy Note9*, S9, S9+, Note8, S8, S8+, S7, S7 edge, Note5, S6 edge+, S6, S6 edge, A8 Star, A8, A8+)* having the Oculus - Gear VR application. The device also must be connected to the internet in order to download the application.

2.5 Design and Implementation Constraints

Since the movie is being developed as s prototype it will have some limitations.
1) The interactive movie will be only limited endings.
2) The main character will have only 3 skill bars
3) The amount of small games will be limited.
4) The project will not save any scores.
5) The application will not require creating an account or logging in

2.6 Assumptions and Dependencies

The main assumption that we have is how can compress all the footage in an app which is desirable to be less than 1GB.
The dependencies can occur during the design phase where our project will be in need of actors. Those people will not be professional actors and we might have to record one scene many times. Also we will need a permission in order to record in public buildings such as University etc.

3. External Interface Requirements

Since our project is in the very early stage of development, we are not able to provide any detailed information about interfaces for the game.

3.1 User Interfaces

The user interface will contain a start Menu which will have “Start Story”, “Options”, “About Us” buttons.
In the section About Us the user can read about our company and the project,
in the Options can edit the Brightness and the Sound of the movie.
The Start Story will start the story which will open new interface containing the story of the game following by new interface with the first scene.

The next UI will be the main interface containing 4 bars on the screen representing the points of Intelligence, Strength, Social Skills and Charisma. Two buttons on the screen in the end of the scene which gives the user the opportunity to choose what path should the story take.

3.2 Hardware Interfaces

The user will require Virtual Reality headset and a smartphone Samsung S6 or higher in order to see the Interactive Student Life. The headset that the project requires is Samsung Gear VR.

4. Function

Below there are listed functional requirements of the system:

Functional Requirements

TITLE: User interface design

DESCRIPTION: The user should easily interact with the interface, for example by starting the game.

RATIONALIZATION: The game effectiveness in producing a desired result to guarantee good user experience.

DEPENDENCY: none

4.2 Functional Requirement 2

TITLE: Response time

DESCRIPTION: The user should not wait long for the response after interaction, for example, be able to play the game within 15 seconds after it is launched.

RATIONALIZATION: The system need to perform fast accordingly to the interaction.

DEPENDENCY: none

4.3 Functional Requirement 3

TITLE: Game display

DESCRIPTION: The user should have a clear view of the game, for example to able to see character's statistics in the game

RATIONALIZATION: Having a clear, self-explanatory view of the game and its components.

DEPENDENCY: functional requirement 1

4.4 Functional Requirement 4

TITLE: Game interaction

DESCRIPTION: The user should be able to easily interact with the game, for example increasing and decreasing character's statistics

RATIONALIZATION: All interactions needs to respond with the right action

DEPENDENCY: functional requirement 1, functional requirement 3

4.5 Functional Requirement 5

TITLE: Data management

DESCRIPTION: The system should automatically store the data, without user interaction.

RATIONALIZATION: The data should be handled by the system.

DEPENDENCY: none

4.6 Functional Requirement 6

TITLE: Data storage

DESCRIPTION: The system should store the data, while the game is being played and dispose of them after finishing playing.

RATIONALIZATION: The data should be handled by the system.

DEPENDENCY: functional requirement 5

5. Other Nonfunctional Requirements

5.1 Performance Requirements

5.1.1 Effectiveness

The system will be capable of producing a desired result according to the interaction for example, after choosing one of the paths, the game should continue start almost immediately.

5.1.2 Scalability

The game will be able to process the increase in workload.

5.1.3 Concurrency

The game is not meant to be played by more than one user at a time on one device. It is a single-player game.

5.1.4 Simplicity

The game will be easy to understand or explain.

5.1.5 Usability

The game will be easy to use by any customer, not only by specified gamers.

5.2 Safety Requirements

5.3 Safety Precautions

The headset produces an immersive virtual reality experience that distracts users from and completely blocks the view of their actual surroundings. Always be aware of surroundings when using the headset and remain seated at all times.

Take special care to ensure that you are not near other people, objects, stairs, balconies, windows, furniture, or other items that you can bump into or knock down when using—or immediately after using—the headset.

Do not handle sharp or otherwise dangerous objects while using the headset. Never wear the headset in situations that require attention, such as walking, bicycling or driving.

Do not stand up or move around while the Gear VR is "plugged in", as this may cause injury to the user or damage the device

Place the front cover of the Gear VR back after using the device.

Do not wear glasses when using the Gear VR. Doing so may cause facial injuries. If you need corrective lenses, it is recommended that you wear contact lenses when using the Gear VR.

5.4 Health Precautions

This product should not be used by children under the age of 13, as this is a critical period in visual development. Adults should monitor children (aged 13 and older) who are using or have used Gear VR for any of the symptoms described below, and should limit the time children spend using it as well as ensure they take breaks during use.

Prolonged usage should be avoided, as this could negatively impact hand-eye coordination, balance and multi-tasking ability.

Adults should monitor children closely during and after use of the headset for any decrease in these abilities. Immediately discontinue the use of the headset if you experience any of the following symptoms: seizures, loss of awareness, eye strain, eye or muscle twitching, involuntary movements, altered, blurred, or double vision or other visual abnormalities, dizziness, disorientation, impaired balance, impaired hand-eye coordination, excessive sweating, increased salivation, nausea,

lightheadedness, discomfort or pain in the head or eyes, drowsiness, fatigue, or any symptoms similar to motion sickness.

Samsung have been conducting clinical trials to ensure Gear VR does not cause serious health problems. As stated in the Health & Safety Manual, about 1 in 4,000 users may experience severe dizziness, seizures, epileptic seizures or blackouts triggered by light flashes or patterns, which can also occur while watching TV or playing video games. Such seizures can occur even to those with no prior seizure history and are more common in children and young people under the age of 20. Anyone who has had a seizure, loss of awareness or other symptom linked to an epileptic condition should see a doctor before using the headset.

Cautiousness of the surroundings is advised while playing.

5.5 Security Requirements

There are no specific security requirements for the game. The game is meant for audience over 18 years old as it contains content inappropriate for younger users. However, the development team will be not responsible of this requirement while the game is being played.

5.6 Software Quality Attributes

5.6.1 Reliability

The user should not experience any unexpected crashes or bugs due the system itself.

5.6.2 Availability

After choosing a path the user will not have the permission to go back to the same
scene again and choose the different path, unless the decision made by the user is followed to one of the endings of the movie. Then the user can go back to the scene with its last decision.

5.6.3 Maintainability

The system will be separated in two parts - the movie itself and the

mini games in the movie. After the filming and editing part is done we will continue to the second part – mini games. Some of the scenes will be filmed in a way which allows us to put any 2D mini game into these scenes.

5.6.4 Portability

Since the project requires a special equipment it will be available to viewers which have the requiring equipment.