VIA University College

IT-SEP4C-S18 – Serious Game

Process report

The Frangovers

Karolina Beliharova   (253810)

Marek Löwy   (253652)

Supervisors

Kasper Knop Rasmussen

Jakob Knop Rasmussen

IT-SEP4C-S18
The Frangovers

Serious Game
Process Report

VIA University
College

T ABLE OF CONTENT

LIST OF FIGURES AND TABLES

IT-SEP4C-S18
The Frangovers

Serious Game
Process Report

VIA University
College

GROUP POLICY

This is the group contract between members Karolina Beliharova and Marek Lowy for their 4th semester project. All statements in this contract are filled, signed and agreed on as a team.

Communication

When the group member does not understand a concept or solution he will ask another group member for help. Group member must communicate with others about any concerns regarding to group work. Each member of the group will be active in all aspects.

Meetings

The meetings will be held either at the university or at one of the group members' home. The place depends on the agreement from previous session. The time of the meeting will be set during the previous session too. The changes can be made only if the new time and place of the meeting will be announced at least few hours before the meeting. The meeting will be held with specific task in mind.

Deadlines

Each member will work on group task collaboratively and on what he is allotted to do and must respect deadlines. If any member of group is struggling with any task he must say it to the rest of the group. If somebody does not work on the tasks repeatedly, the penalty decided by group members will be given.

The absence

The absence during the meetings will be excused only with the reasonable explanation such as health issues, personal problems, etc. Continuous absence will be discussed in the group and supervisors and the possible consequences are: a member will get yellow card; a member will get red card and therefore will be withdrawn from the group with notifying the supervisors.

INTRODUCTION

The purpose of this project is to develop a game that will help people with training their memory. It should do this in a form that is both entertaining and appealing to young people. The project has been developed by a group of young people interested in games with help of experienced supervisors and on requirement of Ensight Games company. Our group, called The Frangovers, we have worked on this project 20 days almost every day and the time of meetings have been agreed on always one day before. The process of the game has been going well without any troubles.

GROUP DESCRIPTION

Our group consists of two members, Marek and Karolina. We have decided to work together since we have worked on several projects together already, and we feel like we are compatible together and our strengths complete each other. Marek is great at complex task planning and has a good idea of what is going on, while Karolina boosts overall mood and brings energy with her. Marek is good at programming but sometimes lacks attention to details and aesthetics, for which Karolina has no blind spots. Karolina is great at level designing and ideating, while Marek can always come up with pros and cons for the argument. Marek is also skilled in different frameworks than Karolina, which makes splitting tasks between each other much easier. Our combined skills result in balanced workflow, with both design and effectivity in mind. Our friendship makes teamwork also very easy. Having known each other for two years now, we both know other one's full skill set, which makes evaluating tasks and ability to solve problems easy. Since both Czech and Slovak languages are almost same, we have language advantage in a way that we solve arguments fast, without a need to explain ourselves too much. We are both very optimistic, openminded people, which helps us sustain good group atmosphere. We have also very similar interests, which helps us with time planning; we spend some of our free time together, during which we can discuss project matters without any problems. Having this good of a compatibility boosts our motivation and confidence even more. We know that we can openly discuss any issue without worrying about offending each other. We are both honest and straightforward people, so being able to discuss openly is important for our group work.

PROJECT INITIATION

BUSSINES CASE AND STAKEHOLDERS

Ensight Games asked us to develop a serious game for memorization training. We have decided to focus on young people in this project and make a serious game which will make memory training fun to do, while still being effective. Since young people don't find traditional memory training funny, we will make a game in which they have to explore labyrinths and find their way around. In those labyrinths, they will encounter several tasks they have to solve in order to progress to next level. Those tasks will the memory training part of the game.

PROJECT ORGANIZATION

Our team will consist of two members, Marek and Karolina. We will use SCRUM framework to organize our time during the project. Marek will be the SCRUM master, since he already has experience in being one, and Karolina will be the product owner because she is great at planning and seeing small details which we might not see otherwise.

PROJECT RISKS

There are several risks during this project. One of them is timescale, we will have 20 days to finish a game which might not be enough. Another risk is work, some team members might have less time to attend meetings due having to go to work. We were also asked to make the game for both PC and mobile devices. We have never done mobile game, which could potentially make the project harder than it seems now.

TIMESCALE

We will make this project in 20 days. Those 20 days will be split into 6 three-day long sprints, with 2 days left for beginning planning and finishing touches.

KEY DELIVERABLES

We will deliver a serious game focused on memory training. This game will be made using Unity 5. The game will run on both PC and mobile platform.

1PROJECT DESCRIPTION

DEFINITION OF PURPOSE

The purpose of this project is to develop an application that will help people with training their short-term memory. It should do this in a form that is both entertaining and appealing to young people.

PROBLEM STATEMENT

We want young people to have fun in their free time while still getting some benefits in terms of short-term memory improvement.
Today, young people see memory training exercises as boring and unattractive. We need to find a way to change this. We need to find something that will help them train their short-term memory in a fun way. We need to make this solution available for them at almost any time, whether they are home, or bored outside. We need to make this solution appealing to them, while keeping it effective.

DELIMITATION

This solution can be used by only one person at the time. The solution will be made only on computer and mobile devices. The solution won't necessarily improve long-term memory.

---

[1] For Project Description see Appendix B in Project Report

IT-SEP4C-S18
The Frangovers

Serious Game
Process Report

VIA University
College

PROJECT EXECUTION

PRODUCT BACKLOG

ID	Priority	Estimated tim	Story
1	Critical	5	As owner I want the game to contain procedurally generated mazes
2	Low	1	As owner I want the game to have smooth animation to change scenes
3	Critical	1	As owner I want the game to be played from third person view
4	Critical	31	As a owner I want the game to contain memory training exercise
4.1	Critical	7	As owner I want the game to have pexeso minigame
4.2	Critical	5	As owner I want the game to have simon says minigame
4.3	Critical	6	As owner I want the game to contain route solving minigame
4.4	Critical	6	As owner I want the game to contain hidden objects game
4.5	Critical	7	As owner I want the game to contain quiz
5	Medium	1.5	As a owner I want the game to contain sound effects
6	Critical	1	As owenr I want the game to have menu
7	Critical	4	As owner I want the game to run on both pc and mobile
8	Critical	3	As owner I want the game to be optimized
9	Critical	5.5	As owner I want multiple levels
10	Critical	1	As owner I want the game to have nice skybox
11	Critical	6.5	As owner I want to have proccess report
11.1	Critical	1	As owner I want group policy
11.2	Critical	1	As owner I want group description
11.3	Critical	2	As owner I want project initiation
11.4	Critical	2	As owner I want project description
11.5	Critical	0.5	As owner I want project execution
12	Critical	21	As owner I want project report
12.1	Critical	0.5	As owner I want abstract
12.2	Critical	0.5	As owner I want Introduction
12.3	Critical	2	As owner I want requirements
12.4	Critical	6	As owner I want analysis
12.5	Critical	4	As owner I want design documentation
12.6	Critical	2	As owner I want implementation documentation
12.7	Critical	4	As owner I want test documentation
12.8	Critical	1	As owner I want conclusion and results
12.9	Critical	1	As owner I want project future
13	High	7	As owner I want the maze to look nice
14	High	3	As owner I want the maze to contain statues
15	Medium	3	As owner I want I want nice labyrinth exit in the center
16	Critical	1	As owner I want minigames to be accesed by statues
17	Critical	1	As owner I want the level to end when certain amount of point has been collected

FIGURE 1: PRODUCT BACKLOG

BURNDOWN CHART

FIGURE 2: BURNDOWN CHART

IT-SEP4C-S18
The Frangovers

Serious Game
Process Report

VIA University
College
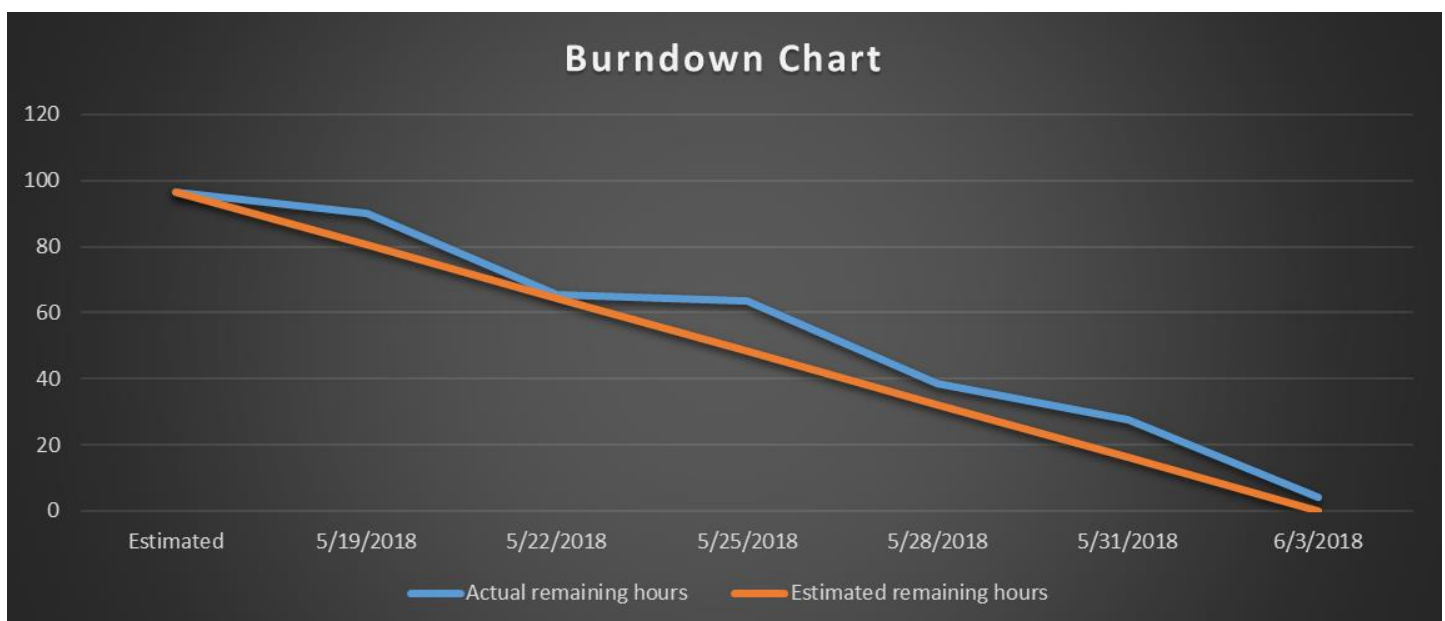
SPRINT REVIEW 19/05/2018

100% WORK DONE:

- Algorithm for generating labyrinths has been implemented and tested. Group contract and Abstract were written

CHANGES AND REQUESTS: NONE

PRODUCT BACKLOG AFTER THIS SPRINT:

ID	Priority	Estimated time	Story
1	Critical	5	As owner I want the game to contain proceduraly generated mazes
2	Low	1	As owenr I want the game to have smooth animation to change scenes
3	Critical	8	As owner I want the game to be played from first person view
4	Critical	30	As a owner I want the game to contain memory training exercise
5	Medium	5	As a owner I want the game to contain sound effects
6	Critical	2	As owenr I want the game to have menu
7	Critical	2	As owner I want the game to run on both pc and mobile
8	Critical	8	As owner I want the game to be optimized
9	Critical	20	As owner I want multiple levels
10	Critical	2	As owner I want the game to have nice skybox
11	Critical	11	As owner I want to have proccess report
11.1	Critical	1	As owner I want group policy
11.2	Critical	1	As owner I want group description
11.3	Critical	2	As owner I want project initiation
11.4	Critical	2	As owner I want project description
11.5	Critical	5	As owner I want project execution
12	Critical	30	As owner I want project report
12.1	Critical	0.5	As owner I want abstract
12.2	Critical	0.5	As owner I want Introduction
12.3	Critical	2	As owner I want requirements
12.4	Critical	8	As owner I want analysis
12.5	Critical	8	As owner I want design documentation
12.6	Critical	5	As owner I want implementation documentation
12.7	Critical	3	As owner I want test documentation
12.8	Critical	2	As owner I want conclusion and results
12.9	Critical	1	As owner I want project future
13	Critical	10	As owner I want the game to be controlled via on screen buttons on mobile devices
14	High	7	As owner I want the maze to look nice
15	High	5	As owner I want the maze to contain statues, which will lead to mini games
16	Medium	2	As owner I want nice background music

FIGURE 3: SPRINT REVIEW 19/05

SPRINT RETROSPECTIVE 19/05/2018

PB-ID	ID	Task title	Responsible	Estimated	Status
1	1	Find algorythm for maze generation	Marek	2	Done
1	2	Implement algorythm in project	Marek	3	Done
1	3	Test maze generation	Marek	1	Done
11.1	4	Group contract	Kajul	1	Done
12.1	5	Abstract	Kajul	0.5	Done

FIGURE 4: SPRINT RETROSPECTIVE 19/05

During this sprint we have set up the scrum files. We planned on how to solve problem we were given and decided to create a game where user runs through the maze and can encounter several statues, which will give him one of several types of minigames to train memory. Maze generating algorithm called "Hunt & Kill" has been selected and implemented in the project. Some documents were also written.

IT-SEP4C-S18
The Frangovers

Serious Game
Process Report

VIA University
College

SPRINT REVIEW 22/05/2018

100% WORK DONE:

- Maze design finished
- Nice skybox has been added
- Several documents in both project and process report
- Temple in the center of the maze was built to exit the labyrinth
- Pexeso minigame

CHANGES AND REQUESTS: NONE

PRODUCT BACKLOG AFTER THIS SPRINT:

ID	Priority	Estimated time	Story
1	Critical	5	As owner I want the game to contain proceduraly generated mazes
2	Low	1	As owenr I want the game to have smooth animation to change scenes
3	Critical	8	As owner I want the game to be played from first person view
4	Critical	5	As a owner I want the game to contain memory training exercise
4.1	Critical	5	As owner I want the goma to have pexeso minigame
5	Medium	6	As a owner I want the game to contain sound effects
6	Critical	2	As owenr I want the game to have menu
7	Critical	2	As owner I want the game to run on both pc and mobile
8	Critical	8	As owner I want the game to be optimized
9	Critical	20	As owner I want multiple levels
10	Critical	1	As owner I want the game to have nice skybox
11	Critical	11	As owner I want to have proccess report
11.1	Critical	1	As owner I want group policy
11.2	Critical	1	As owner I want group description
11.3	Critical	2	As owner I want project initiation
11.4	Critical	2	As owner I want project description
11.5	Critical	5	As owner I want project execution
12	Critical	30	As owner I want project report
12.1	Critical	0.5	As owner I want abstract
12.2	Critical	0.5	As owner I want Introduction
12.3	Critical	2	As owner I want requirements
12.4	Critical	8	As owner I want analysis
12.5	Critical	8	As owner I want design documentation
12.6	Critical	5	As owner I want implementation documentation
12.7	Critical	3	As owner I want test documentation
12.8	Critical	2	As owner I want conclusion and results
12.9	Critical	1	As owner I want project future
13	Critical	10	As owner I want the game to be controlled via on screen buttons on mobile devices
14	High	7	As owner I want the maze to look nice
15	High	3	As owner I want the maze to contain statues, which will lead to mini games
16	Medium	2	As owner I want nice background music
17	Medium	3	As owner I want I want nice labyrinth exit in the center

FIGURE 5: SPRINT REVIEW 22/05

IT-SEP4C-S18
The Frangovers

Serious Game
Process Report

VIA University
College

SPRINT RETROSPECTIVE 22/05/2018

PB-ID	ID	Task title	Responsible	Estimated	Status
14	1	Find nice bush textures	Marek	4	Done
14	2	Find nice pavement textures	Marek	3	Done
12.3	3	Write requirements	Kajul	2	Done
12.2	4	Write introduction	Kajul	0.5	Done
15	5	Find statues on asset store	Marek	2	Done
15	6	Import statues into scenes	Marek	1	Done
10	7	Find nice skybox	Marek	1	Done
17	8	Find nice assets for labyrinth exit	Marek	1	Done
17	9	Design nice looking exit with lights and particles	Marek	2	Done
4.1	10	Find card assets	Kajul	1	Done
4.1	11	Implement pexeso scripts	Kajul	3	Done
4.1	12	Implement gameplay scripts	Kajul	2	Done
4.1	13	Test pexeso minigame	Kajul	1	Done
11.2	144	Write group description	Kajul	1	Done

FIGURE 6: SPRINT RETROSPECTIVE 22/05

During this sprint, we have focused on making the labyrinth look nice. We have made walls with a bush like textures and nice pavement on the floor. We have also added nicely looking skybox. We have decided to make an exit from the maze looking like a small temple, which we then made. First of memory training games has been implemented, pexeso. We have decided to use the cards given to us by Ensight games. The last day we have also been working on the documentation part of the project.

IT-SEP4C-S18
The Frangovers

Serious Game
Process Report

VIA University
College

SPRINT REVIEW 25/05/2018

100% WORK DONE:

- Fade in and fade out animations
- Statue interactions

CHANGES AND REQUESTS:

- Request to leave this sprint almost empty was made, because all team members needed time to work on .Net project.

PRODUCT BACKLOG AFTER THIS SPRINT:

ID	Priority	Estimated time	Story
1	Critical	5	As owner I want the game to contain proceduraly generated mazes
2	Low	1	As owner I want the game to have smooth animation to change scenes
3	Critical	8	As owner I want the game to be played from first person view
4	Critical	5	As a owner I want the game to contain memory training exercise
4.1	Critical	5	As owner I want the goma to have pexeso minigame
5	Medium	6	As a owner I want the game to contain sound effects
6	Critical	2	As owenr I want the game to have menu
7	Critical	2	As owner I want the game to run on both pc and mobile
8	Critical	8	As owner I want the game to be optimized
9	Critical	20	As owner I want multiple levels
10	Critical	1	As owner I want the game to have nice skybox
11	Critical	11	As owner I want to have proccess report
11.1	Critical	1	As owner I want group policy
11.2	Critical	1	As owner I want group description
11.3	Critical	2	As owner I want project initiation
11.4	Critical	2	As owner I want project description
11.5	Critical	5	As owner I want project execution
12	Critical	30	As owner I want project report
12.1	Critical	0.5	As owner I want abstract
12.2	Critical	0.5	As owner I want Introduction
12.3	Critical	2	As owner I want requirements
12.4	Critical	8	As owner I want analysis
12.5	Critical	8	As owner I want design documentation
12.6	Critical	5	As owner I want implementation documentation
12.7	Critical	3	As owner I want test documentation
12.8	Critical	2	As owner I want conclusion and results
12.9	Critical	1	As owner I want project future
13	Critical	10	As owner I want the game to be controlled via on screen buttons on mobile devices
14	High	7	As owner I want the maze to look nice
15	High	3	As owner I want the maze to contain statues
16	Medium	2	As owner I want nice background music
17	Medium	3	As owner I want I want nice labyrinth exit in the center
18	Critical	1	As owner I want minigames to be accesed by statues

FIGURE 7: SPRINT REVIEW 25/05

SPRINT RETROSPECTIVE 25/05/2018

PB ID	ID	Task title	Responsible	Estimated	Status
2	1	Make fade in and fade out transition animations	Marek	1	Done
18	2	Implement statue interactions	Marek	1	Done

FIGURE 8: SPRINT RETROSPECTIVE 22/05

During this sprint, we have implemented fade in and fade out transitions between scenes. Statue interaction script has been implemented also.

We have decided to leave this sprint relatively empty due to .Net project deadline.

Sprint review 28/05/2018

100% work done:

- Simon says minigame
- Find hidden objects minigame
- Sailors puzzle minigame
- Menu
- Third person view
- Use case diagram and description
- Domain model

Changes and requests:

- After discussion at the beginning of the sprint, we have decided to use imported third person character in the final solution, because we thought it will look better. Some time will be saved if we don't have to redo the game with new first-person view.

Product Backlog after this sprint:

ID	Priority	Estimated tim	Story
1	Critical	5	As owner I want the game to contain procedurally generated mazes
2	Low	1	As owner I want the game to have smooth animation to change scenes
3	Critical	1	As owner I want the game to be played from third person view
4	Critical	30	As a owner I want the game to contain memory training exercise
4.1	Critical	7	As owner I want the game to have pexeso minigame
4.2	Critical	5	As owner I want the game to have simon says minigame
4.3	Critical	6	As owner I want the game to contain route solving minigame
4.4	Critical	6	As owner I want the game to contain hidden objects game
4.5	Critical	6	As owner I want the game to contain quiz
5	Medium	6	As a owner I want the game to contain sound effects
6	Critical	1	As owenr I want the game to have menu
7	Critical	2	As owner I want the game to run on both pc and mobile
8	Critical	8	As owner I want the game to be optimized
9	Critical	10	As owner I want multiple levels
10	Critical	1	As owner I want the game to have nice skybox
11	Critical	11	As owner I want to have proccess report
11.1	Critical	1	As owner I want group policy
11.2	Critical	1	As owner I want group description
11.3	Critical	2	As owner I want project initiation
11.4	Critical	2	As owner I want project description
11.5	Critical	5	As owner I want project execution
12	Critical	28	As owner I want project report
12.1	Critical	0.5	As owner I want abstract
12.2	Critical	0.5	As owner I want Introduction
12.3	Critical	2	As owner I want requirements
12.4	Critical	6	As owner I want analysis
12.5	Critical	8	As owner I want design documentation
12.6	Critical	5	As owner I want implementation documentation
12.7	Critical	3	As owner I want test documentation
12.8	Critical	2	As owner I want conclusion and results
12.9	Critical	1	As owner I want project future
13	Critical	10	As owner I want the game to be controlled via on screen buttons on mobile devices
14	High	7	As owner I want the maze to look nice
15	High	3	As owner I want the maze to contain statues
17	Medium	3	As owner I want I want nice labyrinth exit in the center
18	Critical	1	As owner I want minigames to be accesed by statues

FIGURE 9: SPRINT REVIEW 28/05

SPRINT RETROSPECTIVE 28/05/2018

PB-II	ID	Task title	Responsible	Estimated	Status
4.2	1	Find simon says game online	Marek	1	Done
4.2	2	Implement minigame	Marek	1	Done
4.2	3	Create associations with statue and test	Marek	2	Done
4.3	4	Come up with minigame idea	Marek	1	Done
4.3	5	Find map for the minigame	Marek	0.5	Done
4.3	6	Come up with stories containing route	Marek	1	Done
4.3	7	Implement grid layout on the map	Marek	1	Done
4.3	8	Implement game mechanichs	Marek	1.5	Done
4.3	9	Test minigame	Marek	1	Done
3	10	Import and implement third person controlls	Kajul	1	Done
6		Implement menu	Kajul	1	Done
4.4	11	Create scene containing the room image	Kajul	1	Done
4.4	12	Implement game mechanics responsible for hiding objects	Kajul	4	Done
4.4	13	Implement firescore after game is won	Kajul	1	Done
12.4	14	Create Usecase diagram	Kajul	2	Done
12.4	15	Write Usecase descriptions	Kajul	2	Done
12.4	16	Create Domain model	Marek	2	Done

FIGURE 10: SPRINT RETROSPECTIVE 28/05

During this sprint, we have found, and imported Simon says minigame into our game. We came up with an idea to make minigame where the player has to find a route on a map using old sailor's diary. This idea has been taken from the game The Room 2. We have decided that it will be better to have third person view instead of the first-person view. The menu for the game has been implemented and designed. Minigame to remember and find hidden objects in the room has been implemented. Use case diagram and description with domain model have been made.

SPRINT REVIEW 31/05/2018

100% WORK DONE:

- Design documentation
- Quiz minigame

CHANGES AND REQUESTS:

- After supervisor meeting, we have decided to edit some parts of our previously done documentation. We have also decided to reestimate time need in some product backlog items. Besides this, we have implemented quiz minigame and finished design documentation.

PRODUCT BACKLOG AFTER THIS SPRINT:

ID	Priority	Estimated time	Story
1	Critical	5	As owner I want the game to contain procedurally generated mazes
2	Low	1	As owner I want the game to have smooth animation to change scenes
3	Critical	1	As owner I want the game to be played from third person view
4	Critical	31	As a owner I want the game to contain memory training exercise
4.1	Critical	7	As owner I want the game to have pexeso minigame
4.2	Critical	5	As owner I want the game to have simon says minigame
4.3	Critical	6	As owner I want the game to contain route solving minigame
4.4	Critical	6	As owner I want the game to contain hidden objects game
4.5	Critical	7	As owner I want the game to contain quiz
5	Medium	6	As a owner I want the game to contain sound effects
6	Critical	1	As owenr I want the game to have menu
7	Critical	4	As owner I want the game to run on both pc and mobile
8	Critical	2	As owner I want the game to be optimized
9	Critical	3	As owner I want multiple levels
10	Critical	1	As owner I want the game to have nice skybox
11	Critical	6.5	As owner I want to have proccess report
11.1	Critical	1	As owner I want group policy
11.2	Critical	1	As owner I want group description
11.3	Critical	2	As owner I want project initiation
11.4	Critical	2	As owner I want project description
11.5	Critical	0.5	As owner I want project execution
12	Critical	21	As owner I want project report
12.1	Critical	0.5	As owner I want abstract
12.2	Critical	0.5	As owner I want Introduction
12.3	Critical	2	As owner I want requirements
12.4	Critical	6	As owner I want analysis
12.5	Critical	4	As owner I want design documentation
12.6	Critical	3	As owner I want implementation documentation
12.7	Critical	2	As owner I want test documentation
12.8	Critical	2	As owner I want conclusion and results
12.9	Critical	1	As owner I want project future
14	High	7	As owner I want the maze to look nice
15	High	3	As owner I want the maze to contain statues
17	Medium	3	As owner I want I want nice labyrinth exit in the center
18	Medium	1	As owner I want minigames to be accesed by statues
19	Critical	3	As owner I want the level to end when certain amount of point has been collected

FIGURE 11: SPRINT REVIEW 31/05

SPRINT RETROSPECTIVE 31/05/2018

PB-ID	ID	Task title	Responsible	Estimated	Status
12.2	1	Edit introduction	Kajul	0.5	Done
12.4	2	Edit use case documents	Marek	0.5	Done
4.5	3	Find questions for quiz	Kajul	2	Done
4.5	4	Implement scene showing the questions	Kajul	2	Done
4.5	5	Implement mechanics for the quiz	Kajul	2	Done
4.5	6	Test the quiz minigame	Kajul	1	Done
12.5	7	Create activity diagram and decsription	Marek	1	Done
12.5	8	Create sequence diagram and description	Marek	1	Done
12.5	9	Create class diagram with desacription	Marek	2	Done

FIGURE 12: SPRINT RETROSPECTIVE 31/05

Introduction and analysis documents were edited during this sprint. Quiz minigame was implemented. All diagrams and descriptions for design documentation were created.

SPRINT REVIEW 03/06/2018

100% WORK DONE:
- Sound effects
- Optimization
- Second level
- Project report documents
- Process report documents
- Testing of requirements

CHANGES AND REQUESTS: NONE

PRODUCT BACKLOG AFTER THIS SPRINT:

ID	Priority	Estimated tin	Story
1	Critical	5	As owner I want the game to contain procedurally generated mazes
2	Low	1	As owner I want the game to have smooth animation to change scenes
3	Critical	1	As owner I want the game to be played from third person view
4	Critical	31	As a owner I want the game to contain memory training exercise
4.1	Critical	7	As owner I want the game to have pexeso minigame
4.2	Critical	5	As owner I want the game to have simon says minigame
4.3	Critical	6	As owner I want the game to contain route solving minigame
4.4	Critical	6	As owner I want the game to contain hidden objects game
4.5	Critical	7	As owner I want the game to contain quiz
5	Medium	1.5	As a owner I want the game to contain sound effects
6	Critical	1	As owenr I want the game to have menu
7	Critical	4	As owner I want the game to run on both pc and mobile
8	Critical	3	As owner I want the game to be optimized
9	Critical	5.5	As owner I want multiple levels
10	Critical	1	As owner I want the game to have nice skybox
11	Critical	6.5	As owner I want to have proccess report
11.1	Critical	1	As owner I want group policy
11.2	Critical	1	As owner I want group description
11.3	Critical	2	As owner I want project initiation
11.4	Critical	2	As owner I want project description
11.5	Critical	0.5	As owner I want project execution
12	Critical	21	As owner I want project report
12.1	Critical	0.5	As owner I want abstract
12.2	Critical	0.5	As owner I want Introduction
12.3	Critical	2	As owner I want requirements
12.4	Critical	6	As owner I want analysis
12.5	Critical	4	As owner I want design documentation
12.6	Critical	2	As owner I want implementation documentation
12.7	Critical	4	As owner I want test documentation
12.8	Critical	1	As owner I want conclusion and results
12.9	Critical	1	As owner I want project future
13	High	7	As owner I want the maze to look nice
14	High	3	As owner I want the maze to contain statues
15	Medium	3	As owner I want I want nice labyrinth exit in the center
16	Critical	1	As owner I want minigames to be accesed by statues
17	Critical	1	As owner I want the level to end when certain amount of point has been collected

FIGURE 13: SPRINT REVIEW 03/06

SPRINT RETROSPECTIVE 03/06/2018

PB-ID	ID	Task title	Responsible	Estimated	Status
11.5	1	Merge scrum documetation with main document	Marek	0.5	Done
5	2	Find some sound clip for the fire	Marek	1	Done
5	3	Implement temple sound effect in game	Marek	0.5	Done
8	4	Go through the diles in project and check sorting in folders	Kajul	1	Done
8	5	Check if scripts follow SOLID	Kajul	1	Done
8	6	Delete unneccessary files	Marek	1	Done
9	7	Implement second level	Kajul	2	Done
9	8	Redo scripts responsible for loading previous level	Marek	1	Done
9	9	Implement select level in menu	Marek	0.5	Done
9	10	Create new content for quiz and room minigame	Kajul	2	Done
12.6	11	Create screenshots of code for documentation snippets	Marek	1	Done
12.6	12	Write implementation document using snippets and description	Marek	1	Done
17	13	Write script responsible for switching level when enough fire point is collected	Marek	1	Done
11.3	14	Write the initiation for the process report	Marek	2	Done
11.4	15	Write the project decription in process report	Kajul	2	Done
12.7	16	Perform a requirement testing	Kajul	3	Done
12.7	17	Write testing documetation	Kajul	1	Donne
12.8	18	Write result and conclusion	Marek	1	Done
12.9	19	Write project future	Marek	1	Done

FIGURE 14: SPRINT RETROSPECTIVE 03/06

During this sprint, we have done all the final touches to finish the project and have it ready for hand in. We have implemented sound effect for the fire in the next level temple. We went through the files in the project and sorted them into corresponding folders. Scripts were checked for following SOLID principles. The second level has been created and implemented. Implementation, testing conclusion and project future parts of project report were written. Initiation and project description from process report was also written. Scrum files from all the sprints were merged into process reports chapter, project execution.

PERSONAL REFLECTIONS

KAROLINA

This was for the third time I was working on the semester project. Even though I had already worked on projects last years, this one was different. I have decided to work with Marek since I already knew he is skilled, highly motivated and my friend. Our friendship made teamwork easy. We combined our skills and it led to well-going and effective work. I have to say I have learnt a lot from this project. It was for the first time we were developing the game by using Unity. We were supposed to create a serious game for memory training. We agreed on the idea to make a labyrinth together with minigames inside. It was challenging but we were prepared to overcome obstacles. We split tasks between us and worked on it almost every day. When one of us was struggling with some problem or decision, we both looked at it and helped each other. Marek is skilled in programming more than me, so I have asked him several times for advice, then we were able to manage it together and I have learnt from mistakes. However, when none of us knew what to do, the supervisors were always willing to help. Whenever we needed help, get advice or just talk about ideas, they were here for us with great passion.

I really enjoyed generating a random maze when I was creating the second level. Sometimes I could spend a lot of time on working until I am satisfied even when it came only to design. I liked creating those minigames, which are inside the labyrinth since I have learnt some new stuff by playing which is always fun. Besides entertainment from programming, I enjoyed working with my friend. We had a lot of fun while testing and playing around. We met several times for teambuilding as well.

On the other hand, I have found hard to make the game for mobile. First, it seemed like something we could have done in the end quickly but then we struggled with a problem during building the game for mobile. After all, we have found out that we had built errors from scripts we have imported and were crucial for our project. The main problem was the imported third-person character. The project worked fine on the computer, but when we tried to build it for Android, we got some errors we could not solve. It would mean redoing the player, which would require a significant amount of time. We noticed that too late and we have not had enough time to fix it.

In conclusion, I have learnt a lot from this project. I had an opportunity to work on the case for a real company with the specific requirement. I have improved my game development skills and scrum as well. It was a great preparation for bachelor project.

MAREK

This semester I have decided to work with Karolina on semester project. We have worked together since the first semester, so it is natural for me to work with her. We were supposed to make a memory training game. We came up with an idea to mold this requirement into something we could have fun working on, so we oriented our solution on young people. We came up with the idea to make a game which will make training memory fun for young people. Since we also count as young, finding a way to do this wasn't hard at all. We decided to make a maze solving the game, in which we included 5 minigames aimed at different parts of memory training. I was responsible for finding an algorithm to generate the maze and building the first level. I have done some research on different approaches in maze generation and found one, which I liked, Hunt and Kill. I have built the first maze. It was the time to find some nice assets for our game. We have searched for statues specifically since our maze had bushes as walls. After finding the statues we started implementing all the minigames.

I had a lot of fun during this project. Firstly, because I was working with my close friend and our teamwork is very synchronized. Next reason being the actual game development. I like making games, and this semesters idea was quite fun I think. I enjoyed playing around while testing the game, also, it was a lot of fun when we messed up and something hilarious happened. One thing however that I have found hard, was making the game for mobile. At first it seemed as a piece of cake to make it; however, when we finally have gotten to it, we have realized that we had built errors from scripts we have imported and were crucial for our project. Main issues came with the imported third-person character. The project worked just fine on the computer, but when we tried to build it for Android, we got some errors we couldn't solve. This meant redoing the player, which would require a significant amount of time. We noticed this too late and haven't had enough time to fix it. And even though we have fixed the build error in the end, the way the camera is made in the imported scripts makes it far too hard to implement joysticks. Therefore, we haven't made any mobile version.

Overall, I have gained a lot from this project. I had an opportunity to work with scrum and improve my game development skills. I have tried how is it to work on a project for a real company, and how to mold very general task given into real problem formulation, by which I mean turning memory training game into the specifically oriented game with a certain intention.

SUPERVISION

Throughout the project period, we had 2 meetings with our supervisors - Kasper and Jakob, one meeting with another supervisor - Mona. One meeting was necessary at the beginning since we needed to deeply understand the case and consult our ideas.

In the period of working, we needed to schedule the meeting with supervisors again. We had a lot of questions about our system and documentation as well.

At every meeting, the supervisors were willing to help and give us useful advice for every task. The supervisors were not available all the time, but we could easily communicate with them via email since they responded immediately.

SUPERVISOR MEETING 22/05/2018

The purpose of this meeting was to get feedback on our idea for the game. We received recommendation and opinions about our Analysis part mainly Use Case Diagram and Use Case Descriptions. After this meeting with our supervisors, we were able to start with Design part and start implementing the system.

SUPERVISOR MEETING 31/05/2018

The supervisor gave us advice about format and structure of our documentation. Consultation of Design part and testing. We obtained information how to deal with problems in our documentation.

SUPERVISOR MEETING 06/06/2018

The last meeting with supervisors was basically about presenting our game, talking about problems and implementation. We got some advice what we should improve next time.

Conclusions

Our group consisted of two members, Marek and Karolina. We have worked on several projects together already and again, during this project, our strengths completed each other. Combination of our skills led to the result of effective and well-going work. Since we are both optimistic, open-minded people, it helped us sustain good group atmosphere. We openly discussed all issues without worrying about any conflicts. We are both honest and neither of us has a problem to admit a mistake, which made our work easier. One problem in our group was, that we both forgot about one more supervisor meeting and we missed advice that we could have gotten. We are both reasonable, so it was not on purpose, but next time, we must keep eyes on a schedule of meetings better.