The VR Classroom

A LTU student project

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Work Model

To get a good overview of the work that needs to be done, the group has decided to follow the Scrum model with the help of Trello. There are three main labels, "Not started", "In progress" and "Done". By writing down the deadlines and different activities in Trello, every member in the group can work effectively with their individual part. This also prevents multiple members working on the same activity.

Project Management

The project management consists of different roles such as:

<u>Project Leader:</u> Sophia Caspár - Should have an overview and control over what every member in the group is working with and is kept informed on everything relevant to the project. The project leader is the contact person between the project group and the client.
<u>Secretary:</u> Erik Karlsson - Is required to write meeting protocols and be responsible for submissions and all deadlines.
<u>PR-Coordinator:</u> Vikhram Ravi - Is required to keep the Blog-page updated.
<u>Documentation-Coordinator:</u> Claes Andersson - Should have an overview of the documentation of code and assets, and make sure that all parts of the project are properly documented.
<u>Test-Coordinator:</u> Isak Lindgren - Should have an overview of different tests that should be implemented in the project and makes sure that it is implemented.
<u>Graphics-Coordinator:</u> Leo Ozolins Carlson - Is required to look into the graphical part of the project and update the rest of the group.

The members in these roles do not need to do all the work but should make sure that it is done.

Implementation

The project will be split into 4 Sprints. The first sprint will consist of Research, Interview with the Client, Workshop for Teachers and Testing Different VR-Products. The second sprint will mainly consist of working on an alpha version for the project and testing out different VR-Products with Unity. The third sprint will be the main development phase of the project which also includes Testing. The final sprint consists mainly of testing and editing the document before Product Release. By working in sprints, the group can focus on short-term goals which leads to members working more effectively.

Activity and Time Plan

Sprint 1

The goal for this sprint is to familiarise ourselves with current VR solutions and the available hardware in order to better understand the current state of the VR landscape and generate ideas for how it can be applied in the class room. As the first sprint is likely to be reseach heavy, and in order to better divide the workload, we decided to set the following goals for ourselves.

	VR Research
Description:	Since none of us had any experience developing VR applications before, much of the first sprint's time will be spent researching VR hardware and current software.
Goal:	The goal is to gain an understanding for the current VR landscape and be able to better estimate which solutions would work in a school environment. Both from a usability standpoint, but also taking into account cost, development and potential health factors.

	Testing the hardware
Description:	Set up the hardware and install relevant software.
Goal:	Since the group has had limited exposure to VR, actually using VR will help generate ideas and give us a better understanding of what's possible with current technology. It'll also give a better understanding of what kind of experiences work well in VR environments.

	Unity Research
Description:	Unity is the development environment chosen to develop the VR experiences for the project.
Goal:	The goal is to learn the basic workflow for the Unity development environment and familiarise ourselves with how the VR plugins integrate.

	Workshop: Teachers
Description:	Arrange a workshop with actual teachers to discuss their perspective on VR and the possibilities they offer.
Goal:	Actual teachers will hopefully be able to give feedback on what is needed in the classroom and how VR can aid in teaching.

	Alpha Version
Description:	Start production of an actual product prototype.
Goal:	Toward the end of the sprint we hope to have started work on the early stages of one of our products.

Sprint 2

The preliminary plan for the second sprint mainly consists of wrapping up the research focused phase and shifting focus to developing the actual products.

The current goals we want to have a achieved by the end of the sprint are:

	Alpha Version
Description:	Finish up the alpha stages of development..
Goal:	The early stages of product development should be finished and should at least result in the framework of a workable product.

	Report
Description:	Start writing the project report.
Goal:	Fill out the report with relevant information as the products are developed.

	Visit Samurai
Description:	Visit the VR focused company Samurai.
Goal:	Gain inspiration from current development and gain a better understanding for the professional workflow.

	Workshop: School girls
Description:	Participate in a workshop arranged by Peter Parnes.
Goal:	To gain insight into how students would prefer to use VR in practise (and inspire future students!), we've decided to participate in the workshop arranged by Peter Parnes.

Sprint 3

The preliminary plan for the third sprint mainly consists of improving and development the product past the alpha phase. The document will be updated as well.

The current goals we want to have a achieved by the end of the sprint are:

	Development of the Product
Description:	The main development phase of the project.
Goal:	The beta version of the product should be finished and should result in a prototype.

	Testing
Description:	Testing while Developing the product.
Goal:	Most of the code should be tested by the end of the sprint.

	Report
Description:	Continue writing the project report.
Goal:	Fill out the report with relevant information as the product is developed.

Sprint 4

The preliminary plan for the third sprint mainly consists of final touches of the beta version and final testing, to make sure it works correctly. This sprint also consists of finishing the written report. The current goals we want to have a achieved by the end of the sprint are:

	Development of the Product
Description:	Finishing touches on the beta product.
Goal:	At the end of the sprint we should release a candidate product.

	Testing
Description:	Last testing on the product.
Goal:	All code should be tested by the end of the sprint and work!

	Report
Description:	Continue writing the project report.
Goal:	The report should be finished by the end of the sprint.

Risk analysis

Time table	Probability (Pro) 1 = < 20% 3 = 50 % 5 = > 80 %	Consequences (Con) 1 = Low 3 = Medium 5 = > High	Risk (Pro*Con)	Preventative measures
Not prepared	2	4	8	Plan for each week
Needing extra time	2	1	2	Good planning so we don't need the extra time
Other courses	4	4	16	Each person needs to plan so they can handle both courses
Bad deadlines	3	3	9	Help each other if someone falls behind on deadlines
Project Risk	**Probability (Pro)** **1 = < 20%** **3 = 50 %** **5 = > 80 %**	**Consistent (Con)** **1 = Low** **3 = Medium** **5 = > High**	**Risk (Pro*Con)**	**Consequences**
Ineffective work	2	3	6	Have meetings where we discuss what's been done.
Bad group communication	1	3	3	Project leader has to make sure information is communicated in the group
Wrong info about goals in the course	1	4	4	Discuss the goals in the group to make sure everyone understands them