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Game Project proposal

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# Introduction

Games provides a chance to replicate assorted characters as they plunge into different outlines drafted to induce poignancy, thus intensifying compassion and the transferring of comprehension. This document proposed a description of wat our project will entail; including the background of the project. The roles and responsibilities, as well as methodologies used will be given in this document. A financial and risk plan will be included to provide possible financial problems. Risk analysis is important in each project proposal, since any project faces risks.

# Project Description

Our project involves the development of a game. The game that needs to be developed should be compatible with a platform of our choice; either Windows, Xbox, PlayStation or mobile. One limitation was provided to us. This limitation was that this game needn’t make use of firearms.

Our group had decided that the best way to avoid firearms would be to go with a storyline related to fairytales.

# Problem Description and Background

Our group should develop a project for our honors-year according to our supervisor’s needs. Since game development isn’t common around students, we need to do research and learn new platforms; in order to develop a successful game.

We had come face-to-face with some problems regarding our development platforms. In order to develop a PlayStation game, we need to install Linux. Since Windows is necessary to run other applications, most of us would need to install a virtual machine. A virtual machine needs a certain amount of your computer memory in order to function. Our laptops don’t necessarily have the amount of memory to run both Windows and Linux.

If we wanted to develop a game for Xbox, we need older versions of the software we want to use to develop the game. We had decided to not develop a game for Xbox, because using older software cold increase development risks. Newer versions of software are more stable and reliable to use.

Seeing as PlayStation and Xbox platforms holds too many risks, our group has decided to develop a Windows game. Everyone is most familiar with the Windows platform. This platform also supports all the software we need to use to make the game a success.

## Background

Uncle Wolf is a lesser-known fairy tale that originated in Italy and has been retold by Italo Galvino in the book Fiabe Italiane in 1954. The book has been translated into English and is available on Google Books and Amazon (Calvino, 2012).

The story follows a greedy little girl who fell at school and didn’t get any pancakes. Her mother agreed to make her pancakes but because of them not having a skillet, the little girl had to go borrow one from Uncle Wolf. Uncle Wolf, after a long time of getting ready, agrees to lend the skillet in exchange for pancakes, bread, and a bottle of wine. After the girl’s mother made the pancakes she sends the girl back to Uncle Wolf to deliver his payment. On the way, however, she decided to eat the pancakes and bread and drank the wine. Having nothing to give Uncle Wolf she replaced the pancakes with donkey manure, the bread with limestone, and the wine with dirty water. Uncle Wolf was not fooled by this and decided to eat the girl. The gild ran home, but that night Uncle Wolf climbed through the chimney and swallowed the girl whole.

Uncle wolf puts a spin on the fairy tale Red Riding Hood by having the little girl be greedy and lazy. The girl is not beloved and adored and, in the end, succumbs to the wolf.

The story has a very simple moral: Do not be greedy.

The reason Uncle Wolf was chosen, is because of all the different elements in the fairy tale that can relate well to gameplay elements. The skillet, pancakes, bread, and wine can be used as items or weapons in the game. The greedy little girl will be the protagonist while Uncle Wolf the antagonist. The fairy tale will be altered slightly by having the girl not eat the items available to her to use them to traverse the different stages on her way to Uncle Wolf’s house. The first stage and the last will be set in the Uncle Wolf universe and will be the school and the little girl’s house.

On the way to Uncle Wolf’s house, the little girl will have to complete a total of five different stages. Each stage will represent a different lesser known fairy tale. Each stage will be unique in setting, obstacles, enemies, and bosses. The levels will all end in a boss battle with the main character of that specific fairy tale. After all the stages have been completed, the little girl has to face up against Uncle Wolf.

# Scope Statement

## Goal

The goal of the project is to develop a successful game. The success of the game will be measured against the objectives and aims specified below.

## Aims

* The game should be developed for a mature audience.
* Game development should concentrate on quality.
* Real-time strategy, combat arena game influenced by tower defense and Battle Royale.
* Multiplayer capabilities

## Objectives

* **Mature Audience**
  + It must be decided which mature content must be added
    - Violence, gruesomeness, language, mental illusions, fear, etc.
  + The contents chosen will be implemented into the game
* **Quality Game:**
  + The game will be designed to be 2.5D
    - All objects will be created to be 3D
    - The player will view the scene from only one perspective.
  + High quality textures and designs must be used.
  + High quality music must be added
  + High quality controls and physics must be implemented.

# Resource Plan

## Roles and Responsibilities

### Project Sponsor

Our project sponsor, in words our project supervisor is Professor G.R. Drevin. He had provided us with a Xbox 360, which unfortunately we couldn’t use. Also, if any software is needed we can ask our project supervisor.

### Project Manager

Our group has two project managers – Jennifer and Stephan. Jennifer regulates the documentation and time management. While Stephan regulates the group members.

### Project Team

### Task Leader – Stephan

**Characteristics**

* *Problem-solving:* The task leader should excel at problem solving in any field required. Therefore, a wide range of knowledge and skills are preferable.
* *Aid for team:* The task leader should be able to help any team member when any issue arises. A wide range of knowledge and skills are preferable.

|  |  |
| --- | --- |
| **Substantive Task Leader** | **Procedural Task Leader** |
| Person with vision and knows how to make it a reality | Person that provides guidance to team and substantive leader |
| Communicates and explains vision well to team | Follow up on any ideas given by substantive leader |
| Gives suggestions to team that helps develop group discussions. |  |

### Expediter – Jennifer

* Keep group on track towards completing a task.
* Manages all agendas.
* Sets and assess goals.
* Monitor group progress.

### Gatekeeper – Trenton

I have been appointed the role of gatekeeper, what this entails is to ensure that there will be a constant flow of conversation at group meetings where everybody speaks their mind.

This allows for:

• New ideas to be brought up by asking individuals how they feel

• Discussion of ideas whether they are good or not

• Ensure that all that needs to be discussed is done

• Gather any information regarding the project

• Ensure that individuals constantly feel part of the project and never feel left out.

### Recorder - Dehan

Takes notes on discussion and activities that occur during group meetings.

### End Users

Our end users are for anyone. We aspire to attract a more mature audience.

## Labour Types

### Front-End

#### Modeling:

Character Modeling will be done using Blender. Trenton will lead in this task.

#### Concept Art:

The modelling will be based on the concept art. Jennifer will oversee this part.

#### Sound:

Sound is an essential part of games. Without sound no effect will take place on the player. Dehan will be in charge of doing the sound effects.

#### User Interface:

The user interface allows the user to interact with the system. A game needs a user interface to interact with the game. Making choices. Jennifer will be in charge of this.

#### Cinematics:

Cinematics takes place before each level. This provides information to the user regarding the following level. Jennifer and Dehan will be in charge of this.

### Back-End

#### Logic:

Logic entails all coding behind the game. From movement to stats. Stephan oversees this part.

## Equipment and Platforms

### Equipment

The primary equipment for this project will be:

* **A computer along with all the** **peripherals** – All the objectives for the project will be carried out on a computer. This is the most important part of the project as it is where everything will be developed on.

All software used will be accessed on the computer which will be running Windows.

The software will also be used according to licenses received.

* **Strong Graphics Card** – To animate, create 3D models as well as create the virtual environment for the game a strong graphics card is required to develop all the details of the game and then pack them all together.

A graphics card takes all the strain on game development and a strong card provides the best results in the most efficient time.

At this stage, graphics cards that are in hand by the project team are:

* + GTX1060
  + GTX1080
  + GTX960M

### Platforms

* **Unreal Engine**

Unreal Engine is a free to use software specifically designed for developing games. It has the capability for actual coding or coding through bubbles representing predefined function. Custom functions can also be created.

The bubbles method will be used as it is simpler and would reduce the time required to create the game.

Unreal has very good functions to easily create multiplayer games, hence our choice to use it.

* **Blender**

Blender is a free open source software which used for the creation of 3D models as well as implementing animation, simulation, rigging and many more features. It provides an easy-to-use interface with plenty of guides if help is required.

For this project the character models will be created here after the artwork has been done as well as working on the environment for every scene within the game.

* **Adobe Photoshop**

Adobe Photoshop is software which used for the alteration of images. It allows for image editing as well as the creation of graphics and digital art. The software is available to use across several platforms.

This software will be used to develop the artwork around the models as well as the environment for the game. This will allow for a basis for the development of elements within the game.

* **Adobe Illustrator**

It is software which is used to create vector images (a normal image such as jpeg’s size cannot be stretched as it becomes pixelated due to the pixels used whereas vector makes use of paths) which will be used to create illustrations, graphs as well as charts.

This software will be used to create illustrations for the end of scenes as well as provide images which will be used to develop models for the game.

* **Trello**

Trello is an application which allows for task management within projects or even one’s own tasks. It allows for people to see who is working on which task as well as what has been completed. It provides a great easy to use interface and it is free to make use of as well.

Trello is used for the allocation as well as tracking of tasks within this project.

* **Slack**

Slack is regarded as a cloud based communication tool which is used for the communication of users within an organization or for a project team. It allows for people to communicate from mobile as well as PC to send attachments and information.

This is the communication tool that we will be using throughout this project to communicate information as well as planning across to other team members.

# Financial Plan

Equipment

All equipment used within this project is on hand by all project team members, no hardware is required for purchase for the development of the video game.

Software

* Adobe Photoshop – R 124,87/Monthly
* Adobe Illustrator – R249,87/Monthly

The cost of completing the project at this stage will only be the monthly costs for the Adobe software. If there is any extra cost occurring within the project it will be documented in the final report.

# Risk Plan

The following keys will be used in the table describing each risk. As well as each risk’s priority, likelihood of occurring, impact factor and possible solutions:

Priority factor: 1 – Very important, address immediately.

2 – Important, address as soon as possible.

3 – Address as soon as there is time.

4 – Address after project is complete, still a problem.

Likelihood of occurring: 1 – Extremely likely.

2 – Very likely.

3 – Fair chance of happening.

4 – May not even happen at all.

Impact factor: 1 – May cause a lot of damage to project.

2 – May cause a fair amount of damage to project.

3 – May cause damage in aspects of the project.

4 – May cause minimal damage to project.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk** | **Priority factor** | **Likely of occurring** | **Impact factor** | **Possible solution** |
| *The project may not be politically correct* – some might see racism or sexism in the project. | 2 | 3 | 4  We might get penalized for being biased in our project. | Make provision for customization of character’s race and gender. |
| The project might not be *original* enough. | 1 | 2 | 1  We could get bad marks for plagiarism or copying an idea. | The most creative team members can be called in to help with the originality. Research should also be done thoroughly. |
| There might not be *enough time* to complete the project. | 1 | 3 | 1  We would have to rush to the finish line with leaving some parts of the project out in order to finish on time. | Setup a schedule and stick to it, also put in extra time after hours if needed to complete the project. |
| The *team* *members* might be *lazy* on the job. | 3 | 2 | 3  When a team member gets behind on his work, it has a bigger effect on his part of the work before it impacts the rest of the project. | As soon as a team member starts to slack, the whole team will call for a meeting to address the problem with the team member. |
| The resources might be limited. | 1 | 3 | 1  We might have to put in a lot of effort to do things the difficult way to get them done. | We can do research on all the available platforms (google, NWU library, etc.) and use all the time we have on campus to work from our lab computers with all the software needed. |

# Procedure and Methods

## Procedures

The Gantt-Chart above shows a rough view of how we will prioritize our game-development.

## Methodology

Our group has decided to move towards the Agile methodologies. As there are several to choose from, we had done some research and decided that the SCRUM-methodology will be most useful.

We will use the SCRUM-methodology as follow:

### Sprint Planning

* Set up a weekly goal that must be completed.
* This will occur each Monday.

### Stand Up

* Set up daily goal.
* Tasks for the day are provided.
* Will take place each morning of the week.

### Sprint Review

* Discuss what was completed during the week.
* Explain how problems have been solved.
* This will take place each Friday.

### Sprint Retrospective

* Discuss what went wrong during week.
* Explain some ideas of improvement regarding problems.
* Will also take place each Friday.

# References

Calvino, I. 2012. Italian Folktales: Penguin Books Limited.