Project plan + study diary

Jungle Hunt

version 1.5

Group 3

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| TUT | Pervasive Computing | TIE-21106 Software Engineering Methodology |
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| Version | Date | Authors | Explanation (modifications) |
| 1.0 | 18.01.2018 | Lassi R. | Initial version |
| 1.1 | 29.01.2018 | Lassi R. | Added tools & technologies, personnel information |
| 1.2 | 19.2.2018 | Vili S. | Fixing stuff based on feedback |
| 1.3 | 11.3.2018 | Lassi R. | Added sprint 2 study diary |
| 1.4 | 18.3.2018 | Samu M. | Added definition of done, adjusted minor styling errors in Word. |
| 1.5 | 8.4.2018 | Pinò S. | Added sprint 3 study diary |
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# PROJECT RESOURCES

This chapter holds the project resources.

## Personnel

For each person

* estimate contribution in person hours for each sprint
* travels or other known absences

Product owner:

**Lassi Rintala**

Development team:

**Lassi Rintala (Scrum master for sprints 0 and 1)**

* Email: [lassi.rintala@student.tut.fi](mailto:lassi.rintala@student.tut.fi)
* Previous experience: 3 years working as a software engineer
* Special skills: C/C++
* Specific fields of interest: Unity

**Samu Mäkinen (Scrum master for sprint 3)**

* + - * Email: [samu.makinen@student.tut.fi](mailto:samu.makinen@student.tut.fi)
      * Previous experience: University coding, slight hobbyist coding for approx. 1 year.
      * Special skills: Jack of all trades, master of none.
      * Specific fields of interest: Game Design, C++, Unity

**Vili Saura (Scrum master for sprint 4)**

* + - * Email: [vili.saura@student.tut.fi](mailto:vili.saura@student.tut.fi)
      * Previous experience: High School and University coding.
      * Special Skills: C++
      * Specific fields of interest: Game Design, Unity

**Pinò Surace (Scrum master for sprint 2)**

* + - * Email: [pino.surace@student.tut.fi](mailto:pino.surace@student.tut.fi)
      * Previous experience: University study projects
      * Special skills: C, C++, Java, Python
      * Specific fields of interest: Unity

## Process description

Milestone 1: End of sprint 1, requirements 1-3 done

Milestone 2: End of sprint 2, requirements 4-6 and 10 done

Milestone 3: End of sprint 3, requirements 7-9 done

Milestone 4: End of sprint 4, polishing the game

Goals and success criteria:

* Every member agrees to work around 8 hours per week
* We are aiming for a grade of 4 or higher.

Success measurement:

* Feedback from the customer
* Reaching milestones in time
* Assignment grade

Running the project:

* Meetings twice a week (Sunday evenings physical meeting and a shorter Skype meeting another day)
* Telegram chat group
* Project management with Agilefant
* Version control with Git
* Documentation available
* Scrum master responsibility is changed every sprint
  + Lassi is the first scrum master for sprints 0 and 1
  + Pino scrum master for sprint 2
  + Samu scrum master for sprint 3
  + Vili scrum master for sprint 4
* Responsibilities (who implements what, takes care of what, …) are mostly decided in the weekly meetings
* We discuss the status of the project in our weekly meetings.

Definition of done:

* Agilefant stories are done when all its internal tasks are done and approved upon within the group.
* We agree upon the specifics of each task as a group and play test each change to validate them.

## Tools and technologies

Table 1.1: Tools used in the project.

|  |  |  |  |
| --- | --- | --- | --- |
| **Purpose** | **Tool** | **Contact person** | **version** |
| Documentation | MS Word (word processing)  [office.microsoft.com](file:///\\intra.tut.fi\..\..\..\..\..\Local%20Settings\Temp\office.microsoft.com) | Vili Saura | 2010+ |
| Doxygen (comment notation and documentation generation) | Lassi Rintala |  |
| Communication | Telegram | Pinò Surace |  |
| Skype (internet calls)  <http://www.skype.org> | Pinò Surace |  |
| Version management | Git | Lassi Rintala |  |
| Code implementation and compilation | Unity | Samu  Mäkinen | 2017.3.0f3 |
| Visual Studio | Lassi Rintala | 2017 |

# StUDY DIARY

This chapter holds your journal of lessons learned during the course. That is, **more detailed analysis of previous Sprint’s contents**.

## Sprint 1 (Retrospective meeting Sunday 11.2.2018)

### What went well

* Work load distribution
* Meetings
* Project work in general
* Studying Unity

### What difficulties you had

* Modeling the rope
* Player catching the rope
* Difference between 2D and 3D game object components (tutorials in 3D)
* Scaling issues with GUI (canvas, camera)

### What were the main learnings

* How to use Git
* Unity basics
* Agilefant basics
* Task estimation
* Agile methods

### What did you decide to change for the next sprint

* Scrum master changed to Pino
* Potentially changing the game theme from jungle to something else
* Make all the levels in some template / placeholder form

## Sprint 2 (Retrospective meeting Sunday 11.3.2018)

### What went well

* Work load distribution
* Meetings
* Project work in general

### What difficulties you had

* Learning Unity
* Technical difficulties with Unity editor
* Overlapping work
* Scaling issues with GUI

### What were the main learnings

* More about Unity
* Teamwork
* Agilefant was utilized better this sprint

### What did you decide to change for the next sprint

* Scrum master for sprint 3 will be Samu
* Potentially changing the game theme from jungle to something else
* Moved requirement 10 to sprint 2, so sprint 4 is reserved only for polishing the game

## Sprint 3 (Retrospective meeting 8.4.2018)

### What went well

* Work load distribution
* Meetings
* Project work in general
* Implementation of extra customer requirement went very well
* Handling of bugs

### What difficulties you had

* Unity
* Technical difficulties with Unity editor
* Customer requirements were added
* Bugs introduced during development

### What were the main learnings

* Animation advanced settings
* To be ready for changes in the requirements
* Asynchronous execution in Unity
* Flip of the Sprites in Unity
* Sounds in Unity

### What did you decide to change for the next sprint

* Scrum master for sprint 4 will be Vili
* Potentially changing the game theme from jungle to something else
* Change orientation of the game levels

# RISK MANAGEMENT PLAN

Table 4.1: Project risks.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk ID** | **Description** | **Probability** | **Impact** | **Seriousness** |
| P1 | Short term absence | 3 | 2 | 6 |
| T1 | Hard disk failure | 2 | 2 | 2 |
| M1 | Too low task time estimations causing tight schedule | 2 | 2 | 2 |
| M2 | Confusion in task assignment (overlapping implementations etc.) | 1 | 1 | 1 |
| S1 | Huge refactoring of current implementation | 3 | 3 | 9 |
| S2 | Customer changes or adds requirements | 2 | 2 | 4 |
| S3 | Minor bugs in the final release | 3 | 1 | 3 |
| S4 | Major bugs in the final release | 1 | 3 | 3 |

## Personnel risks

Try to estimate risk probability, use a scale of **1 to 3** or Small, Medium, Large.

Other criterion will be the impact or severity. So, how the risk will harm you, if realized. Use similar scaling as in probability.

### Risk P1: short term absence of one person

**Root cause (source):** A key person will be absent for several days.

**Importance (seriousness):** from the table, basically probability and impact, possibly combined with frequency.

**Avoidance:** Avoid being near people who have a flu

**Response (prevention):** Redistribute the work load and share all relevant information, so that the team will be able to carry on.

**Recovery (survival):** Redistribute the workload; focus on the most important features.

## Technology risks

### Risk T1: hard disk failure

**Symptom, early warning sign:** disk makes noise, arbitrary reading errors occur more often than before.

**Source or reason:** hard disk is at the end of its lifespan, or hard hit

on computer while disk was running.

**Probability:** 2 medium (on scale 1-3)

**Seriousness:** 2 medium (on scale 1-3)

**How to avoid:** buy a new disk when starting a project.

**How to prevent:** when first symptoms occur, take additional back-ups and change the disk as soon as possible.

**How to survive:** back-ups, and a replacement disk or whole computer.

## Management risks

### Risk M1: Too low task time estimations causing tight schedule

**Reason:** Tasks take longer to complete than originally estimated

**How to avoid:** Make estimations always bigger than expected time used

**How to prevent:** Really concentrate on roughly implementing the feature rather than for example paying too much attention to small details

**How to survive:** Implement tasks in the order of priority

### Risk M2: Confusion in task assignment (overlapping implementations etc.)

**Reason:** Task status is not updated correctly in Agilefant or otherwise absence of communication between team members about which tasks they are working on

**How to avoid:** Always keep Agilefant updated

**How to prevent:** Ask team members if someone is already working on the task you are about to start

**How to survive:** Choose one of the parallel implementations to be used, discard others

## Software risks

### Risk S1: Huge refactoring of current implementation

**Reason:** Some software component has been first poorly designed and needs reimplementation in a new way to support further development

**How to avoid:** When designing feature implementations, think about them in their context far ahead

**How to survive:** Coordinate development so that the refactoring won’t cause too much interference in other developers work

### Risk S2: Customer changes or adds requirements

**Reason:** Customer changes existing requirements or adds some more

**How to avoid:** Can’t be avoided

**How to survive:** Have the software implemented so that adding more things in it is easy enough

### Risk S3: Minor bugs in the final release

**Reason:** Due to implementation not careful enough, bugs are still existing in the final product release

**How to avoid:** Extensive testing and careful design and implementation throughout the development process

**How to survive:** Nothing to do after final release

### Risk S4: Major bugs in the final release

**Reason:** Due to implementation not careful enough, bugs are still existing in the final product release

**How to avoid:** Extensive testing and careful design and implementation throughout the development process

**How to survive:** Nothing to do after final release