Elevator Man (wip) Proposal

## **Introduction**

This document is to serve as the project plan for the application we are developing as a team. The problem given to us is we “are required to design and develop a medium-size 3-tier software system within an application domain of our choice”.

Our solution to this is to develop a small Windows game, written in the Java programming language, featuring a user interface for controls and menu screens, logic for in-game enemies and weapons, along with backend storage in a MySQL database to keep track of player scores.

The objective of our endeavour is to have a functional game that can be accessed by our target users. A possible constraint on this goal is that the time given to produce the final product might not be enough to develop the game in Java, or the features we would like aren’t possible with the resources allocated. A breakdown of these risks can be found in the Risk Analysis section of this document.

The main motivator for this project is for the end product to fulfill the user’s needs and meet our arranged time schedule.

## **Project Organisation**

First and foremost, our Project Organisation. This is one of the key attributes, if not the most important, of our project overall. We established this straight away when we all gathered to discuss our group project. Going through several ideas of communication, including facebook and whatsapp, we decided that whatsapp would be the easiest and most convenient ways of communicating as we all had access to mobile phones at all times.

The WhatsApp application allowed us to set up a group contact that we regularly use to discuss ideas, give each other feedback and arrange group meetings. This means that we do not have to rely on discussing any vital information about our group project, strictly in group meetings during our weekly Friday seminars.

Another major factor in our project organization is flexibility. Some of us have jobs and conflicting timetables so we are not always able to meet the demands of others when deciding on when to meet. Luckily, we are able to be as flexible as possible when considering meeting up for group meetings and are able to come to a reasonable time when we meet up.

To capitalize on project organization, a major factor in all of this is team chemistry. We all seem to be on the same wavelength when it comes to bringing up ideas and important decisions for the group project. Without this chemistry, things may not always go our way, resulting in our project being unable to flow fluently enough.

Our model for development will be the Incremental / Iterative type, with smaller tasks taking on the Big Bang model approach.

## **Risk Analysis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| List | Risk | Likelihood | Consequences | Strategies |
| Animation | Character and background being too small | Moderate | Remodeling the structure. | Change the size of the Animation and background to scaling |
| Group Work is lost | If the person who has the work loses it | Low | Lose of time and work. | Stored on the cloud. |
| Individual Work lost | Losing a piece of what you were working on. | moderate | Unfinished work parts. | Store and different backups made on the cloud. |
| Difficulty programming in Java | We can't develop the game in java | Low/Serious | No product | The backup is Python or Visual Basic |
| Database | If Database is not secure | Low/Serious | Program data is lost | Using MySQL. |
| Miss Deadline(s) | Deadline is missed or work is due but incomplete. | Moderate - if it’s personal.  Serious - if its coursework. | Work isn’t the quality we desire / Lower Grade | Strict schedule & regular communication |
| Program doesn't meet Spec. | The program doesn’t include the required features listed in the Specification. | Serious | Failed Unit | Ensure the program includes the required UI, Logic and DB Storage |

## **Resource Requirements**

Software requirements:

Graphics - Adobe Photoshop with some use of Dreammaker.

Programming - For programming, a software for Java, with backup softwares for Python and Visual Basic. GitHub for source code management.

Presentation - Microsoft Powerpoint or Prezi. For video presentation, Windows Movie Maker and a screen capture software to capture gameplay.

Database - MySQL or a text based software.

Other - Microsoft word, or Google Drive for documenting, Whatsapp allows to to communicate with each other.

Hardware requirements:

Main thing is a computer/laptop, for presentation, HDMI cable otherwise we could also use a USB.

People:

Test clients to provide feedback on the program.

## **Work Breakdown**

**Activities:**

Source Code:

A major activity in the development of the game is the core source code. A large percentage of time will be placed into the development of the code, as well as a large amount of group members. Java is the likeliest language to be used, although Python and Visual Basic would also allow for completion of this task.

User Interface:

Interface development is another activity to be completed. The game will contain multiple user interfaces. There is also a leaderboard of high scores and a shop. These must all have an interface to aid user interaction. The interfaces and all visual objects will generated using Java code.

Storage:

Whilst playing the game, as well as between uses, there are multiple values which must be stored and remembered. A database will be used to save such values. The database management system MySQL will be used to create the database.

**Milestones:**

Project Requirements: 18/11/16

Full outline of the applications requirements are complete.

Design Completion: 13/01/17

Model of final application including structural, interaction and behavioural models and user interface design.

Prototype Complete: 17/02/17

Working prototype of final application.

Final Testing: 03/03/17

Thorough testing of completed code for bugs and glitches.

Final Deadline: 28/04/17

Final hand in of code and report.

**Roles:**

Our roles are mostly dependant on the task at hand, but for specifics we have 2 people working on a large part of the source code, while two other people direct the task and coordinate the writing of documentation among the group. We all take part in each task, but some people use their particular skills to our advantage in certain areas.

## **Project Schedule**

We want to make sure that we use the full allocated time given to us for this project. This is to make sure that we completely understand how to go about making our software and also that it works in the way in which we intended. All bugs must be ironed out and the piece of software that we have made must work perfectly.

*For gantt diagram see last page of this document.*

## **Monitoring Mechanisms**

To keep the group from falling into disarray, we have been meeting regularly on wednesday afternoons. Here we discuss goal deadlines, who is currently assigned to what, and help each other with difficult tasks, all of which we note down in minutes.

Between meetings we talk using WhatsApp instant messenger, this can be useful in encouraging our teammates to finish work on time and gather feedback on where we are in relation to our pre-designed schedule.

