**Software Requirements Specification**

**for**

**<Unknown Game Title>**

**Version 1.0**

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**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# **Introduction**

## **Purpose**

The purpose of this project is to design a 3D based learning module that will be both fun and educational for Chemistry students beginning to learn chemical reactions.

## **Project Scope**

This learning module/game is intended for anyone looking to learn chemical reactions through a fun user friendly game. The user will start the game in detention which resides in a chemistry lab in the basement of a high school. User will quickly fall asleep while attempting to study and appear in a dream world based on the detention room. In order to escape detention the user will need to learn specific chemical reactions, apply critical thinking, problem solving, and situational awareness to help them through each level.

# **Overall Description**

## **Product Features**

The client will need to be able to maneuver through a set of levels that will test what they learned from surrounding textbooks in each room.

## **Operating Environment**

The software must run through an executable file created by Unity which will display a custom user interface.

## **Design and Implementation Constraints**

This program must be in accordance with all Requirements and coding standards. Any deviation from either Requirements or coding standards without consent from an authority figure on the project may result in lost points.

## **User Documentation**

There will be hints included in the software accessed after one minute of failure to complete task.

There will be a small “thought” box that will appear listing locations (books) to look into to find answers to problems.

# **System Features**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Subsystem | Title | Tracking ID | Priority | Status |
| Game Instance Subsystem | Start New Game | GI01 | High | Not Complete |
| Resume Game | GI02 | High | Not Complete |
| Quit Game | GI03 | High | Not Complete |
| Player Subsystem | Movement | PL01 | High | Not Complete |
| Item | PL02 | High | Not Complete |
| Chemical Monster Subsystem | Planned Monster | MR01 | High | Not Complete |
| Random Monster | MR02 | Low | Not Complete |
| Chemical Puzzle Subsystem | Solve Puzzle | PZ01 | High | Not Complete |
| Fail Puzzle | PZ02 | High | Not Complete |
| Combat Subsystem | Attack | CM01 | High | Not Complete |
| Run | CM02 | High | Not Complete |
| Game Attribute Subsystem | Change Location | GA01 | High | Not Complete |
| Show Score | GA02 | Low | Not Complete |
| Request Hint | GA03 | Low | Not Complete |
| Save Game | GA04 | High | Not Complete |
| Load Game | GA05 | High | Not Complete |
| Game Over | GA06 | High | Not Complete |

## 

## **Functional Requirements:**

**Room Designs:**

Laboratory 1: A large seemingly normal laboratory except for the lack of windows over complicated locked door allowing access to the room. Room for the most part is dim apart from one light lit in the center of the classroom with all the user’s FAILING grades displayed and a set of taunting instructions illustrating the only way of escape is to do what the player has failed at time and time again… CHEMISTRY!!!!

Laboratory n: ….

**Common commands:**

Move (direction) - forward (w), left (a), right(d), south (s) (**optional movement scheme)**

Open/Check (object i.e. door, gate, drawer…) - left click simple way to interact and open objects.

Grab (item… TBA) - left click to pick up the item.

Drop (item… TBA) - left click in open are to drop any extra items

Use (item i.e. element) - use equipped weapon

Kill Chemical monster… - left click on monster with matching element to attack monster.

1. **External Interface Requirements (Non-Functional Requirements)**

## **User Interfaces**

Minimum requirements: a text console above a textbox so the user can enter commands and read the returned input in a confined area. A list of common commands to the right or left would be helpful to get new users playing.

## **Hardware Interfaces**

* *Desktop:*
  + *OS: Windows XP SP2+, Mac OS X 10.9+, Ubuntu 12.04+, SteamOS+.*
  + *Graphics card: DX9 (shader model 3.0) or DX11 with feature level 9.3 capabilities.*
  + *CPU: SSE2 instruction set support.*