CS499  
Senior capstone project

PROJECT TITLE WILL GO HERE

Software Design Document

Version 1.0

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# Revision History

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| --- | --- | --- | --- |
| Date | Version | Description | Author |
| 29 June 2016 | 1.0 | Initial version of PROJECT TITLE WILL GO HERE’s Software Design Document | Randall Rowland |
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# Introduction

The Software Design Document is a document to provide documentation which will be used to aid in software development by providing the details for how the software should be built. Within the Software Design Document are narrative and graphical documentation of the software design for the project including sequence diagrams, collaboration models, object behavior models, and other supporting requirement information.

## Purpose

The purpose of this software design document is to provide a low-level description of PROJECT TITLE WILL GO HERE, providing insight into the structure and design of each component. Topics covered include the following:

* Class hierarchies and interactions
* Data flow and design
* Processing narratives
* Algorithmic models
* Design constraints and restrictions
* User interface design
* Test cases and expected results

In short, this document is meant to equip the reader with a solid understanding of the inner workings of PROJECT TITLE WILL GO HERE.

## Goals and Objectives

PROJECT TITLE WILL GO HERE is a single, comprehensive programming project using the C++ programming language. The goal is a proof of concept program to demonstrate learning objectives learned throughout American Sentinel University’s Bachelor of Science in Computer Science Game Programming Specialization degree program. PROJECT TITLE WILL GO HERE will incorporate the learning objectives from:

* CS130 – Introduction to Computer Programming
* CS205 – Intermediate Computer Programming
* CS221 – Software Engineering
* GP210 – Introduction to Game Design
* GP221 – Introduction to Game Programming
* GP312 – Computer Graphics Programming
* GP435 – Artificial Intelligence for Gaming

The objectives of PROJECT TITLE WILL GO HERE:

* Apply software engineering techniques to a larger-scale problem
* Integrate appropriate computer science theory, concepts, and methods
* Demonstrate proper documentation
* Display comprehensive programming knowledge

## Definitions, Acronyms, and Abbreviations

* **AI** – Artificial Intelligence.
* **Object** – Is a data structure that has state (data) and behavior (code). Objects correspond to things found in the real world.
* **OOP** – Object Oriented Programming. Programming language model organized around objects rather than “actions” and data rather than logic.
* **Scholarship** – Academic study or achievement; learning of a high level
* **UML** – Unified Modeling Language. For definition and uses, see <http://www.uml.org/what-is-uml.htm>

## References

Christopho. (2016, January 25). Zelda ALTTP resource pack for Solarus. Retrieved June 29, 2016, from <https://github.com/christopho/solarus-alttp-pack>

Morrison, M. (2005). Beginning game programming. Indianapolis, IN: SAMS.

## License

### Software Design Document/Source Code License

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# Design Overview

## Introduction

The Design Overview is section to introduce and give a brief overview of the design. The System Architecture is a way to give the overall view of a system and to place it into context with external systems. This allows for the reader and user of the document to orient themselves to the design and see a summary before proceeding into the details of the design.

## Technologies Used

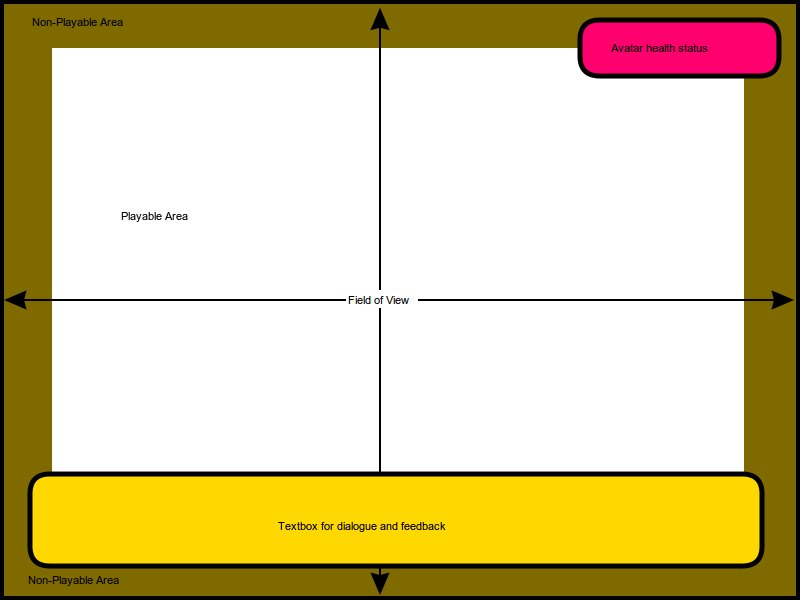
## System Architecture

## System Interfaces and Operation

## Constraints and Assumptions

# User Interface Design

## Description of the User Interface



## Interface Design Rules

The interface design rules for PROJECT TITLE WILL GO HERE are derived from Ben Shneiderman’s “Eight Golden Rules of Interface Design”. The following list offers a description of each rule, as well as how the rule applies to PROJECT TITLE WILL GO HERE.

## Objects and Actions