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| UAS Software Development Project 1 |
| Ninja Game |
| Software Design Document |

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# Introduction

## Scope of the Project

Provide a description and scope of the software and explain the goals, objectives and benefits

of your project. This will provide the basis for the brief description of your product.

We are making a mini game for entertainment purposes. Ninja game is a simple web based 2D endless running game[1] with a database system that allows player to track top scores.

## Document Overview

Provide an overview of this document and its organization.

## Reference Material

This section is optional.

List any documents, if any, which were used as sources of information for the document.

## Definitions and Acronyms

This section is optional.

Provide definitions of all terms, acronyms, and abbreviations that might exist to properly

interpret the SDD. These definitions should be items used in the SDD that are most likely not

known to the audience.

**Ninja** is a kind of [spy](https://simple.wikipedia.org/wiki/Spy) or [assassin](https://simple.wikipedia.org/wiki/Assassin) who lived in [Japan](https://simple.wikipedia.org/wiki/Japan) from the beginning of [14th century](https://simple.wikipedia.org/wiki/14th_century)[2]. The image of an extraordinarily strong and deft warrior with exotic equipment and movement techniques has been widely spread in modern culture.

# User Interface

## Site Map

Describe how do the pages in the site link to each other.

## Page Layout and Design

Describe the layout(s) of the page design(s) used in your site.

# Database

Describe and illustrate the whole database design of your site. All tables, table structures and relations should be presented.

We have one table, displaying player names and scores.

# Client Side SW Design

Here you can list and name the classes that you are going to have. For each class you can list their attributes (data fields) and member functions (methods).

If you are not going to have any classes, you can list the (JavaScript) functions that you know that you will have. You can describe the purpose of each function with a few lines of text.

Functions could be described with the following points, but it is not absolutely necessary to describe functions so accurately in the design phase.

* General description of the function and what it is used for.
* The name of the function.
* The return type.
* Ranges of return values and their meanings.
* Parameter names, types, whether the parameter is input, output or both and under what circumstances it is read or written.
* Assumptions on the parameter values.
* Assumptions on other conditions, such as global data or system state.
* Input validations that the function performs.
* Side effects of the function.
* Exceptions the function might throw and under what conditions.
* Non-trivial algorithms used.
* Non-trivial data structures used and for what purpose.
* Other non-trivial functions that the function calls.
* If the software has a layer structure, or some other inner partitioning, then to which part or layer this function belongs (this information should be evident from the naming convention).

Describe here also which global variables, arrays, or other data items you will need.

Classes:

**Ninja** (height, width, x-position, y-position, health, score)

Member functions: move(), update(), show()

**Enemy** (height, width, x-position, y-position, damage)

Member functions: move(), show(), crash()

# Server Side SW Design

Describe here the design of server side software. For server side, you can describe similar things as for the client side.