# Software requirements specification for project

# Blood, sweat, and voxels

## Authors

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## Introduction

We want to improve the user's experience of interacting with the game world and make this world feel more realistic. That’s why we decided to use the voxel world representation. Our final library will be used as a graphic base for other more complicated applications.

## Glossary

Voxel - (**vo**lumetric + pi**xel**) - a volumetric image element containing the value of a raster element in three-dimensional space. Voxels are analogous to 2D pixels in 3D space.

Graphics engine - a program that performs a core or essential function for developing other applications involving graphics.

Vizualizator - a part of a program that will draw stuff on screen.

Scene - computer model for representing virtual space.

## Actors

Game developer - wants to develop his own game. He chooses our engine and works on voxel-based game.

Medical software developer - can develop a program to visualize results of magnetic resonance imaging (e.g.).

## Functional requirements

### Strategic Use-cases

*[Optional. White-level use-cases. This section is useful when there are too many blue-level use-cases and they should be grouped somehow.]*

#### *Use-case <UC-S-1>*

#### *Use-case <UC-S-2>*

### Use-cases for game developer

#### *Use-case <UC-1-1>*

**Actors:** game developer

**Goals:** create a game based on voxels

**Mains success scenario:**

1) Developer wants to create a game

2) Developer find our API on github

3) He develops game logics

4) He use our lib to visualize his in-game actions

5) Developer successfully create a game

### Use-cases for medicine software developer

#### *Use-case <UC-1-1>*

**Actors:** medicine software developer

**Goals:** create a program that can visualize results medical imaging devices

**Mains success scenario:**

1) Medicine worker wants to create a tool for representing MRI-results in a volume form.

2) He find our engine on github

3) He uses preferences of voxel models to represent layer-based data.