

# Requirements

## Functional Requirements

- F01 Protagonist and NPC's<sup>1</sup> can move.
- F02 Protagonist can aim in any direction.
- F03 Protagonist can collect items from the ground.
- F04 Protagonist can equip collected items.
- F05 Protagonist can consume potions.
- F06 Protagonist can gain experience points to gain levels.
- F07 Protagonist can spend levelpoints to increase stats (attributes eg. strength, fire rate, and precision).
- F08 Protagonist can purchase potions (power-ups)
- F09 Protagonist and NPC's can fire their weapon
- F010 Protagonist and NPC's can take damage.
- F011 Protagonist and NPC's will die, if damage exceeds their hit points (HP).
- F012 Hostile NPC's has a chance to drop loot, when they die.

## Non-Functional Requirements

### Product requirements

- P01 The system must save select game data to a database.
- P02 The system should be developed using JMonkeyEngine (JME).
- P03 The system should be developed in Java SE.
- P04 The system should be compatible with Windows, Mac OS X and Linux.
- P05 The system must be component based, and implement a component framework.
- P06 Components must be able to load and unload dynamically.
- P07 The system must apply algorithms and data-structures.
- P08 The system must implement an AI.

---

<sup>1</sup>Non Playable Character

## Quality requirements

Q01 The game world should be procedurally generated.

Q02 The game should be playable with a game controller.

Q03 Equip-able items should be randomly generated.

Q04 The game should contain an engaging soundtrack.

Q05 The game must detect collisions between entities.

Q06 NPC's must implement an AI

## Supplementing requirements

S01 Hello

## Requirement Prioritization

Functional Requirements						
Id	Name	MoSCoW	Sys. <sup>2</sup>	Arch. <sup>3</sup>	Risk	Total
F09	Protagonist and NPC's can use their weapon	<i>M</i>	5	3	2	10
F01	Protagonist and NPC's can move.	<i>M</i>	4	1	2	7
F02	Protagonist can aim in any direction.	<i>M</i>	4	1	2	7
F11	Protagonist and NPC's will die, if damage exceeds their HP.	<i>S</i>	3	3	3	9
F10	Protagonist and NPC's can take damage.	<i>S</i>	3	1	2	6
F04	Protagonist can equip collected items.	<i>C</i>	3	3	3	9
F12	Hostile NPC's has a chance to drop loot, when they die.	<i>C</i>	3	2	3	8
F03	Protagonist can collect items from the ground.	<i>C</i>	3	2	2	7
F05	Protagonist can consume potions	<i>C</i>	3	2	2	7
F06	Protagonist can gain experience points.	<i>C</i>	1	1	2	4
F07	Protagonist can purchase potions	<i>W</i>	1	1	1	3
F08	Protagonist can spend level-points to increase stats	<i>W</i>	1	1	1	3

---

<sup>2</sup>System benefit

<sup>3</sup>Architectural importance

Non-Functional Requirements						
Id	Name	MoSCoW	Sys.	Arch.	Risk	Total
Product Requirements						
P02	The system must be developed using JMonkeyEngine (JME).	<i>M</i>	—	—	—	—
P03	The system must be developed in Java SE.	<i>M</i>	—	—	—	—
P05	The system must be component based.	<i>M</i>	—	—	—	—
P06	Components must be able to load and unload dynamically.	<i>M</i>	—	—	—	—
P07	The system must apply algorithms and data-structures.	<i>M</i>	—	—	—	—
P08	The system must implement an AI.	<i>M</i>	—	—	—	—
P01	The system should save select game data to a database.	<i>S</i>	4	3	3	10
P04	The system should be compatible with Windows, Mac OS X and Linux.	<i>S</i>	—	—	—	—
Quality Requirements						
Q05	The game must detect collisions between entities.	<i>M</i>	5	4	5	14
Q01	The game world should be procedurally generated.	<i>S</i>	4	4	4	12
Q04	The game could contain an engaging soundtrack.	<i>C</i>	1	2	2	5
Q02	The game should be playable with a game controller.	<i>C</i>	2	1	1	4
Q03	Equip-able items should be randomly generated.	<i>C</i>	2	1	1	4
Supplementing Requirements						
S01	Hello	<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	<i>3x</i>