

TI2206 - Software Engineering Methods  
**Requirements Zuma**

Zuma Deluxe

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## 1. Functional Requirements

### 1.1 Must Haves

- The game shall start with grid and track without no marbles;
- The marbles should move over a predefined track;
- The queue of marbles shall move over the track one position every time step towards the end position;
- If three or more marble of the same color form an uninterrupted sequence, they shall be removed from the queue;
- There shall be a set amount of marbles each game;
- The user interface shall contain information such as scores and remaining lives;
- The marbles shall be shot with a defined velocity;
- The marbles shall have different colors;
- If the marbles reach the end position, the player loses one life;
- If the player loses all lives, the game is over;
- If the player succeeds in removing all the marbles from the track before they reach the end position, the game is won;
- The shooter shall be positioned in the middle of the grid;
- The shooter can be turned using the arrow keys;
- The player can shoot a marble by pushing a button on the keyboard;
- The shooter can rotate in all possible positive and negative angles.
- ...

### 1.2 Should Haves

- The game shall have a pause button;
- The game shall show a counter for remaining lives; ...

### **1.3 Could Haves**

- The game shall have a progress bar to show the certain amount of points needed to finish the level;
- The game shall have score bonus;
- The shooter shall be turned using the mouse cursor;
- The shooter shall fire a marble with the mouse key;
- The game shall have an inviting and attractive design;
- The game shall show the highest score.
- ...

### **1.4 Would/Won't Haves**

- The game won't have multi-player competition.

## **2. Non-Functional Requirements**

- The game shall be implemented in Java;
- For the iterations after the delivery of the fully working version, the Scrum Methodology shall be applied.