Delft University of Technology

TI2206 - Software Engineering Methods

Team: Zuma Deluxe

Zuma Requirements

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1. Functional Requirements

1.1 Must Haves

For the following project, the team gathered the requirements regarding the functionality and service of the game Zuma. The functional requirements describe what a software system should do, and within these requirements, they were grouped in four categories using the MoSCoW model:

- The grid and track shall start empty without any marbles on it;
- There shall be set an amount of marbles in the track queue each game;
- The marbles shall move over a predefined track;
- The track queue of marbles shall move a fixed distance per time interval over the track to the end position;
- The marbles have different colors;
- If three or more marbles of the same color form an uninterrupted sequence, they shall be removed from the queue;
- The marbles shoot and move with a defined velocity;
- The shooter shall be positioned in the middle of the grid;
- The shooter shall be turned by using the arrow keys;
- The shooter shall fire a marble by pushing a button on the keyboard;
- The shooter shall rotate in all possible positive and negative angles.

1.2 Should Haves

- The user interface shall contain information such as scores and remaining lives;
- If the player succeeds in removing all the marbles from the track before they reach the end position, the game shall be won;
- If the marbles reach the end position, the player shall lose one life;
- If the player loses all lives, the game shall be over;
- The game shall have a pause button;

1.3 Could Haves

- The shooter shall be turned using the mouse cursor;
- The shooter shall fire a marble with the mouse key;
- The game shall have a progress bar to show the certain amount of points needed to finish the level;
- 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

While a functional requirement describes what a should system should do, the non-functional requirements place constraints on how the system will do so, and they are listed below:

- The game shall be implemented in Java;
- For the iterations after the delivery of the first fully working version, the Scrum methodology shall be applied;
- The game will be available on platforms that support Java, i.e. Windows, MacOS and Linux.