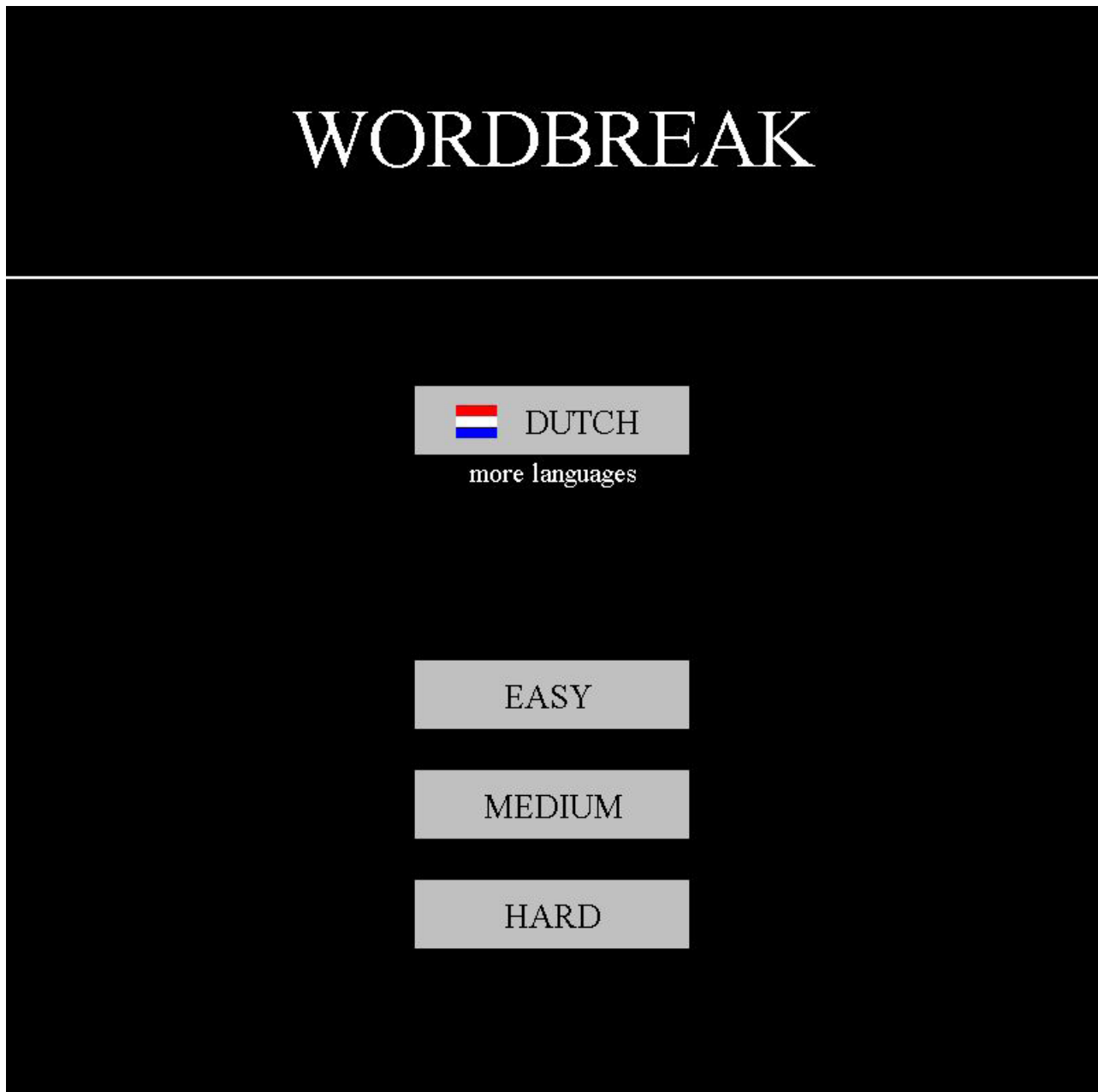


Program your breakout



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INTRODUCTION

The game 'Breakout', also known as 'Arkanoid' is a game which a majority of people have played in their youth or are still playing. The specific arcade gameplay of 'Breakout' keeps the game simple but still very attractive, mainly because of the very low level of understanding and the extra difficulties/challenges via for instance a varying amount of power-ups. The challenge for us is to take this 'old' and some might say genius game to a next level.

In this report 'Wordbreak' is elaborated; our interpretation of a next level Breakout game. Firstly the UML diagram is developed to explain the core of the game with all its different features. Since this diagram might be too abstract more explanations of the game will follow. The main idea behind the game; how it works and how this game can be assessed as a new, assuming experience for all Breakout-players. Finally, right after the game mechanics of 'Wordbreak', future improvements will be described.

UML DIAGRAM

In this UML-diagram 'Wordbreak' is elaborated to provide a rough overview of which functionalities this breakout-game actually has. The titles of each individual class are stated at the upper box. The links between them are explaining how they relate to each other. Then the variables are summed up to state how the game is visualized. In each lowest block of the class, the functionalities/methods are summed up. These methods describe how elements in the game are behaving.

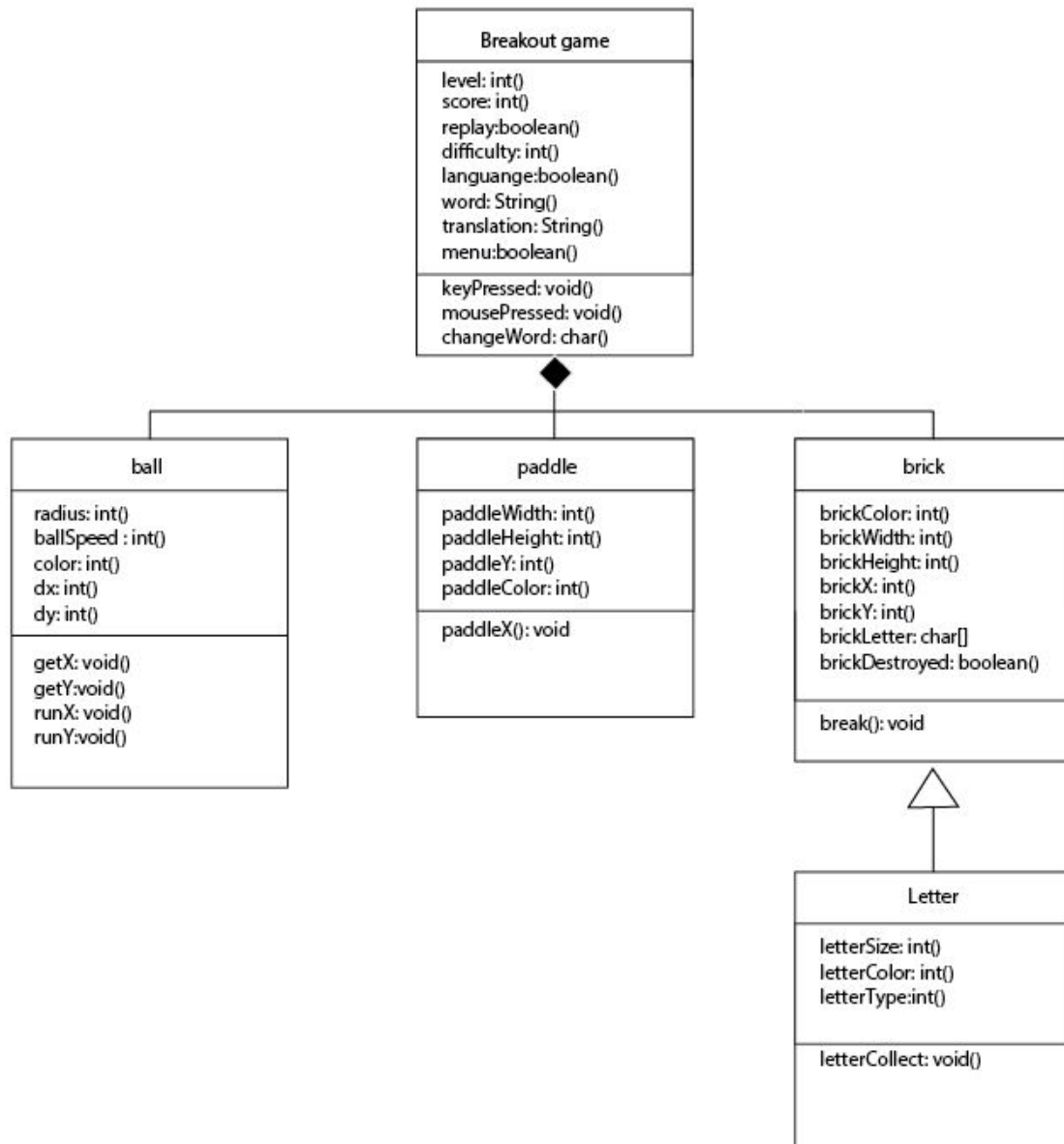


Fig. 1 - The UML diagram

WORDBREAK

An essential part of a game to play it and to keep playing it, is the aspect of fun that is generated by certain elements in a game. Some of these elements are speed, accuracy, high scores, but an element that triggers the most is originality; a new element. In case of this Breakout, a new, original element will be integrated. This new element is based on the goal to make words by breaking bricks to teach young children a language. Players have the possibility to choose the language you want to learn (for this version only Dutch is possible) and a difficulty standard to play in; easy, medium and hard. This standard will influence the speed of the ball during the game.

In each level you get one word of a set of words for a specific level of which you have to 'break' the translation. Every time you break a brick with the right character, it will be added to your own translation in the top. If not, the brick will just break and the letter will not be added to the translation, thus disappear. An extra feature for further development could be the drop down of a wrong letter as a bomb. This will give an extra challenge to the game and consequently more excitement. This extra challenge might be activated after finishing the approximately first ten levels. Moreover a confirmation of letters via catching falling letters, you hit, could be a challenge after some more finished levels. Besides that, the difficulty of the words will increase in each level so you can also improve your vocabulary.

Furthermore, the goal is to get the translation as quick as possible; the faster the higher the score. If you think you can improve a level, you are able to replay the level, since you only got one life each level. Whenever you break all the bricks you do translated your word, but your time score is not that sufficient. So that makes this game acquire the players to know their words and have some game skills.

In the first levels for each word, a starting character will be provided to make it easier to avoid synonyms or any other similar confusions. As mentioned, you have to try to get the right word as fast as possible. Since for this version it isn't possible to direct the ball during the game exactly the way you would like to, the order of breaking the bricks and getting the letters is still irrelevant. By directing the ball you are challenged to break the bricks with the right letters.

GAME MECHANICS

Within this Breakout game there are some game mechanics that make the game; the paddle, bricks, ball, walls and characters. The paddle, the blue rectangle, is the most important one of these, since the user is using it to hit the moving ball. By controlling the paddle, the players can keep the ball playing which makes you able to destroy the bricks which is the basic goal of every 'Breakout'. In this particular 'Breakout' it is essential to direct the ball in the right direction, because you have to get the right characters.

That makes the bricks also a very important aspect. Since players have to break the bricks to collect letters, the bricks can provide the extra elements to the game. A brick can contain a certain amount of points but can also have the possibility to contain something else; a power up, as in specialties with the characters.

The ball is a game mechanic which is essential to the game play, but you can only influence its path by the use of the paddle. Besides that, a ball can only break bricks; hit the wall (with exception the 'wall' underneath the paddle) or hit the paddle. Still, without the ball, it wouldn't be possible to break the bricks and therefore collecting letters in the gameplay of 'Wordbreak.'

The walls are the borders of the game. Still, we can address these elements as game mechanics, because of the danger of getting game over when the ball will be missed by the player with the paddle. In that particular case, the ball won't have a wall to bounce of back into the game and you lost.

The characters that come out of the bricks are also game mechanics in this specific new version of 'Breakout'. As mentioned, you have to get the right letters, with which you have to make the right word to go to the next level. This challenge/ goal is an important part of the gameplay.

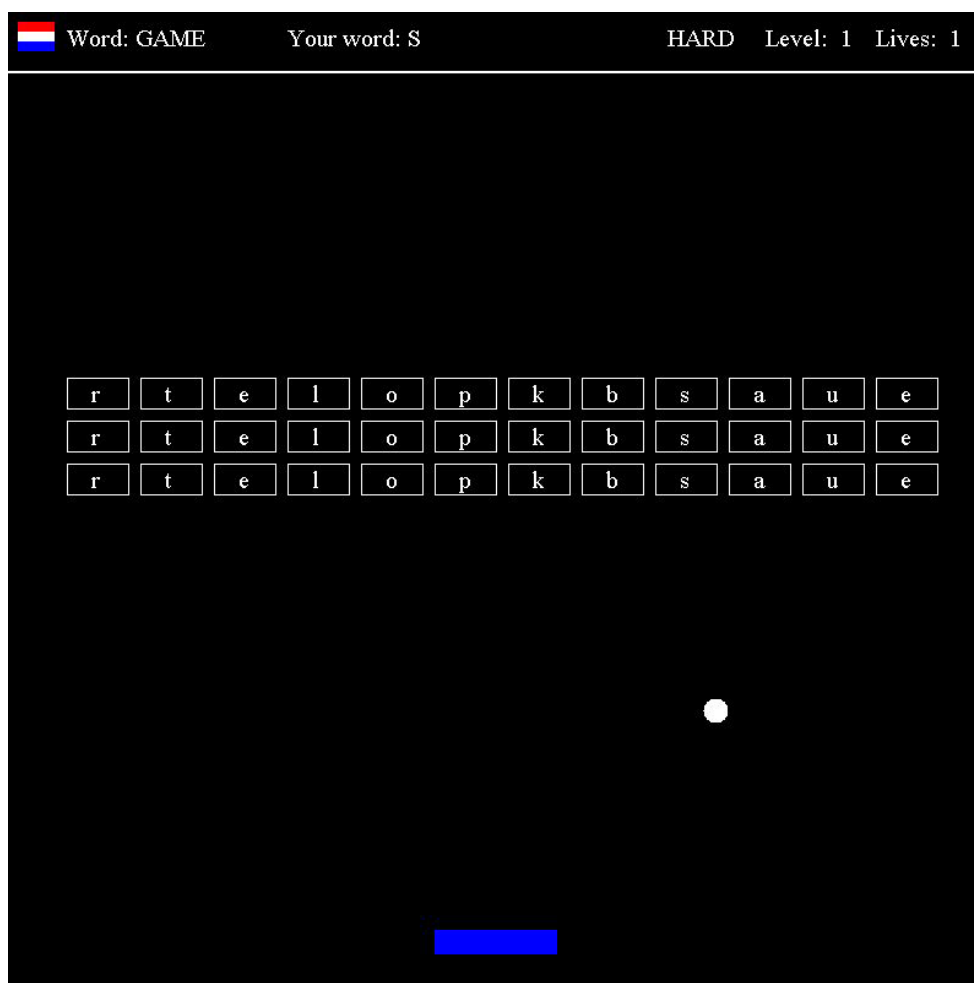


Fig. 2 - The game

FUTURE IMPROVEMENTS

For this new invented game called 'Wordbreak' is still a lot of space for improvement. Unfortunately a few elements are not integrated in this first version of the game. A few of these elements are missing and there are still a few bugs in the game which do not belong there, which will be mentioned henceforth.

In this first version it is still not possible to give a direction to the ball. This would be an extra skill for the player to aim at the bricks with the right letters to get a higher score. To get a higher score a timer and score has to be integrated, which is not, right now. Unfortunately I did not manage to get the letters collected drawn in the upper bar. That is why the game is finished when you cleared out all bricks. Then a second level is made where you have to break a word assessed as more difficult due to its length. An extension of the amount of levels will be there in a next version.

Then a few wrongly integrated elements, which could not be solved. For instance the paddle and bricks still have some strange movements when the ball hits it. Finally there is something wrong when clicking 'menu', after gameover and then a difficulty. Right now in this game over screen you have to click try again to actually play again. This is not intended, like the other bugs.

