A Little History

Tetris is a video-game originally designed and programmed by Alexey Pajitnov in the Soviet Union. [3] It was released on June 6, 1984 and the name is derived from the Greek numerical prefix tetra- and Pajitnovs favorite sports, tennis. [1]

Basic Rules

The game is primarily constituted by tetrominoes, the four-element special case of polyominoes. There are seven types of tetrominoes for the player: a bar lined up with four blocks, an L shape tetrominoes with three blocks on the left and one block on the bottom right and its mirrored version, a squared shape tetrominoes, a Z shape tetrominoes with two blocks on the bottom and two on the top, a S shape tetrominoes, and an upside down T shape tetrominoes with three blocks on the bottom and one block on the middle top. The traditional way of playing tetrominoes is to making a horizontal line of ten blocks without gaps. The tetrominoes will fall down from the top in a random sequence and the player can manipulate them by moving it to left or right or rotate it by 90 degrees. Once the line of ten blocks is reached, the line will disappear and any tetrominoes above that line will fall down. The play will enter into the next level after a certain number of lines are cleared and the tetrominoes will fall a bit faster accordingly. The game will end if the playfield is filled with tetrominoes to the top and no tetrominoes can be dropped. [2]

Variation of Rules

In my design, I will do a little variation to the original version. The game will contain two modes: easy and master. In the easy mode, the player will play the traditional version of Tetris. But there will be no easy spin that the tetrominoes will not stop falling when the player try to rotate the tetrominoes. When stacks of tetrominoes fall once a horizontal line of ten blocks has been completed, they will directly fall with the same height of the line that has been cleared and in against to the law of gravity, tetrominoes will not float or change its original position. However, in the master mode, the line is not always removed as soon as it is completed. It is cleared at a random rate and the player has no way to predict
which completed line will disappear. Also, the standard for a completed line will change: as long as blocks are put together without any gap, the line could be either horizontal, vertical or diagonal. Once a line has been cleared, stacks of tetrominoes will fall but they will be slightly tilted as if they are affected by the gravity. For example, if a squared tetromino is place above a L shaped tetromino, then when they fall, the squared will fall off from the L shaped one. Nevertheless, in order to balance the difficulty of the game, there will be easy spin and the player can see the next tetrimino prior to its presence. The player may also store five tetriminoes at most and put it back into the playfield when the player sees the suitable space.

**Scoring**

The user interface will have a playfield placed on the left side with ten blocks as its width and fifty blocks of height. On the right side, there will be a line stating the score and the level. In the master mode, two more lines will be added, reminding the player the next tetrimino and the stored tetrominoe. In the easy mode, a single line clear is worth 100 points, a four lines clear at one time is worth 800 points (known as tetris) and a back-to-back tetris worth 1200 points. The level will raise if the player has gained 5000 points each time and the falling speed will boost up with half as much. If the player reaches 100 levels, the game will automatically enter into the master mode. In the master mode, the scoring of vertical lines and horizontal lines is the same to the previous. Yet, a single diagonal line is worth 1000 points. Each time after line clear, the player will also receive a random extra bonus as the compensation to the tilting of tetrominoes. If tetrominoes do not tilt (bugs that the programmer failed to detect), the player will not receive the bonus point. The player may trade their points for more spaces to store their tetrominoes if they start the game from the easy mode and enter to the master mode with the completion of 100 levels in the easy mode. The trading policy will be 1000 points for one more spaces and the player can not store more than 12 tetrominoes and the increment of storing space is only temporary. That is to say, if the player has used the sixth stored tetrimino, then the next sixth stored tetrimino will charge again 1000 points.

**References**

