OVER AND OVER – IvanBasic
Homeputerium Basic 10 Liner contest 2020 – Category "Extreme-256"

Start: Using Spectaculator emulator, select 48K mode and click on Open File, select *Over And Over.tap*
Type LOAD "", click on the Cassette icon and click on Play icon. Then type RUN.

Purpose: Escape from the tower, jumping over the falling rocks, reaching the top of any of the side walls.
Blocks cannot be pushed. Being hit by a block is a miss, 5 misses ends the attempt.
A score and hi-score are included to make the game more arcade-style. Score increases with each block fallen,
the higher the block stacks, the higher the score is.

Movements: o&p=left&right, q=jump. Single key pressing movement. The character jumps towards the faced
side, two blocks height, one block onwards. No vertical jumping. In case of free falling, the character can be
driven with left&right.

Coding: The program has two main coding algorithms:

1/ Character´s movement and jumping (key detection, two frames per direction) and collision detection (free
falling, colliding with a block or wall). For this purpose it is used ATTR (colour attributes).
2/ Blocks falling (character hitting and block detection), it uses ATTR as well.

The structure of the program is as follows:

-Line 4 initialises the variables, it runs only the first time the program is run.
-Line 5 sets the variables of a new game , and prints part of the scoreboard; it makes a loop for creating the
variable for the sprite and its frames (this would not be necessary for each new game, just in the first run);
the location of this loop is due to accomplish the max length of every line (256 chars).
-Line 6 completes the scoreboard (same reason, keep lines below 256 chars), and prints the start message
and the tower. The bottom of the tower is printed in white (INK 7), in a random (PLOT command) height, so
every attempt will have different height (and difficulty).
-Line 22 sets a new falling block, with random colour and random face; score is increased, only if the character
is inside the tower, this is, if the character reaches the top and stays in a safe location above one wall, the
score will not be increased (no risk, no reward...)
-Line 102 prints the character, erasing the last position (by printing a red brick as background), checking the
ground for potential free falling, and checking if it reached the top of a wall, in such case the game ends and
a message appears, setting a new score record in such case.
-Line 105 prints the block and erases last position, checking if there is a hit, in such case losing a life, and with
zero lives finishing the game and starting again in line 5.
-Lines 110, 111 and 115 detect key press and moves the character, checking ATTR for collision detection.
They use PEEK 23560 (system variable that stores last key pressed at any time) instead of INKEY$, for a better
key detection.
-Line 130 closes the loop, going to 22 if a new block must be released, or to 102 for ongoing block fall.

Graphics:

No User Defined Graphics were created; all sprites and tiles are designed using OVER (CHR$ 21+CHR$ 1) to
blend characters from the standard set. This makes the program to be a bit slower but is saves space for
accomplishing the line length limit.