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User Manual

The system I created is called snakes and apples. Switch 9 is used to reset the game, and it should always be reset after programmed to the board. Once switch 9 has been switched off, the snake which is represented by green LEDs, will start moving to left, starting with its head LED that is 9 columns from the left and 10 rows from the top and has two body segments represented by green LEDs that are located in consecutive columns to the right. The first apple will start 10 rows down and the second column from the left and is represented by a red LED. The snake can never be still, moving one LED at a time, and is controlled by key 3, key 2, key 1, and key 0, which changes the direction of the snake’s head left, up, down, and right respectively, and the body always follows the head at the same speed. The snake however can only move in 90 degree turns, so it can never instantly switch from left to right or up to down or vice versa. A player increases their score by contacting the head of the snake with an apple, to increase their score represented by the three 7-segment displays Hex 2, Hex 1, and Hex 0. This also increases the length of the snake’s body. This continues until the snake’s head moves off the end of the board or contacts one of its body segments. If this happens, all LEDs on the board will turn off and the score the player received will remain on the displays. Using the switch 9 will reset the game to its original state and the score to 0.