Our design achieves level 4 requirements.

Our design implements the game Snake. To start the game, press the center button. This will cause the snake to begin moving. The user controls the direction the snake travels by pressing the up, left, right, and down buttons. If the snake “head” collides with the red “apple” the snake will become longer. If the snake “head” collides with either the blue border or another segment of the snake the game resets. The game is displayed on a computer monitor. Flipping the reset switch while turn off the display and reset the game.

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| Center Button | Starts the Game |
| Up Button | Changes the direction of the snake if its traveling left or right |
| Right Button | Changes the direction of the snake if its traveling up or down |
| Left Button | Changes the direction of the snake if its traveling left or right |
| Down Button | Changes the direction of the snake if its traveling up or down |
| Reset Switch (SW0) | Blanks the screen and resets the game |
| VGA connector | Connects the FPGA to the monitor |