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### **Project Title: FPGA Fruit Ninja**

Our project is a recreation of the popular app game Fruit Ninja, using an FPGA. The project will include a video feed using VGA to display a depiction of “fruit”, and the user will “swipe” to cut the fruit. There will be a small “remote” with an accelerometer, gyroscope, and button attached to do so. The game will be played as such: fruit are launched from the bottom of the screen into the “air”, or the screen. The user’s objective is to slice fruit by pressing down on the button and swinging with the remote, like in a Wii game. The user’s cursor moves around the screen, and the cursor can be re-calibrated to the center of the screen. There will also be “bombs” which cannot be swung at; if they are, the game is over. The game keeps track of the user’s score and should have start and end game screens. Rendering the fruit will include semi-realistic physics (launching and falling), as well as animations for when the fruit have been sliced. Additional features could include sounds triggered at a successful swipe, an unsuccessful swipe (in the sense that a bomb has been swiped), multi-player functionality, and a depiction of fruit that is more realistic.