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Questions:

1. 2^4 = 16 combinations
2. A) 4, 4 possible buttons to press

B) 6, C(4,2)

C) 10, C(4,2) + C(4,3)

3) Start with first switch on, then turn on the remaining switches one at a time trying each button with each other switch. Then do the same thing with switch 2, then 3, etc.

4)Non-volatile, it will keep the stored information even when not powered.

5) 50mhz

6) 5 + 1 Demo

7) We downloaded .bit files to re-configure how the different inputs interacted with the board. The data was stored on the Nexys board’s FPGA. The file then changed how the buttons and switches affected the output. The inputs were the buttons and switches. The outputs were the green LEDs and the Red 7-segment display. By changing the inputs we were completing/breaking circuits that would provide binary information to the system. The system then gave certain outputs based on the inputs and the .bit file in the FPGA. It is digital because there are only 2 possible states for the input, on and off, there aren’t any analog signals.

8) The 8th signal is for the decimal point, and the other 7 signals are for each of the 7 segments.