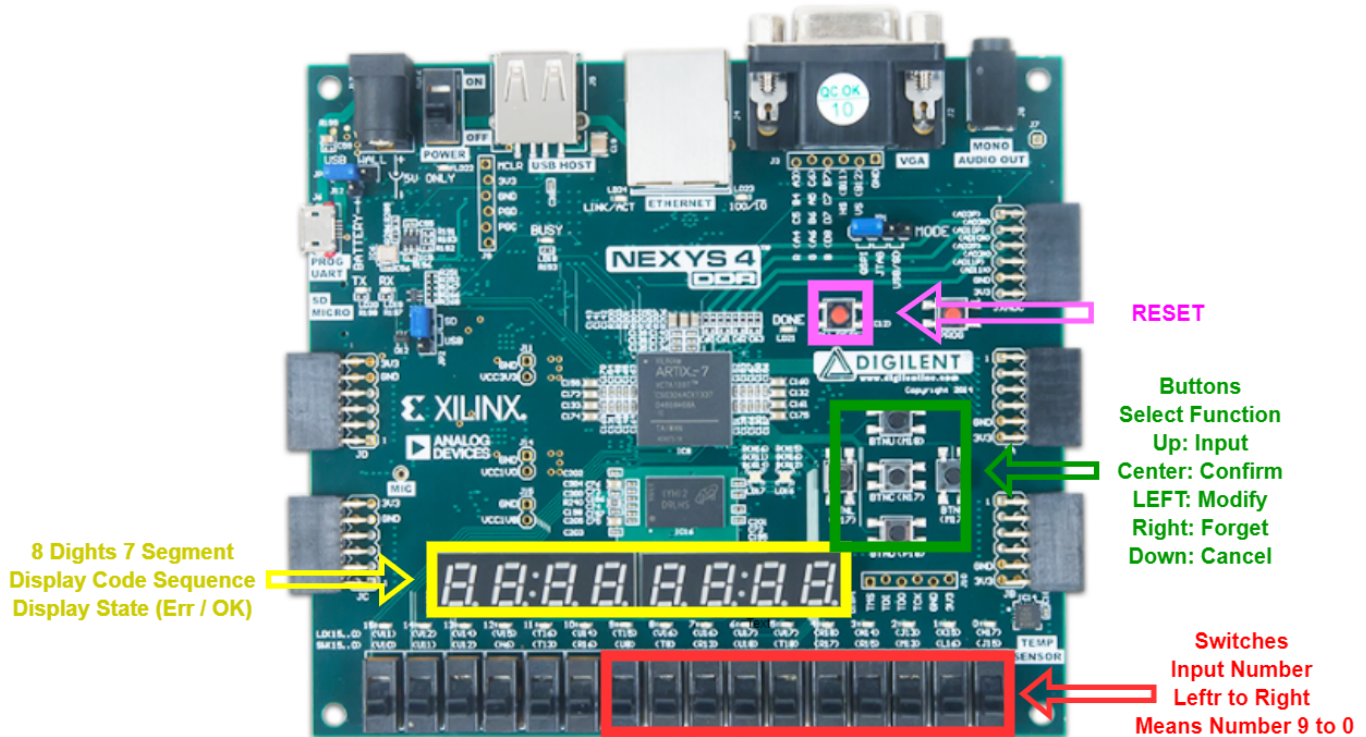# University of Birmingham, 2020 Digit Design Assigment: An Combination Lock

Using VHDL language and implement on Nexys4 DDR ,design by Yifan Du

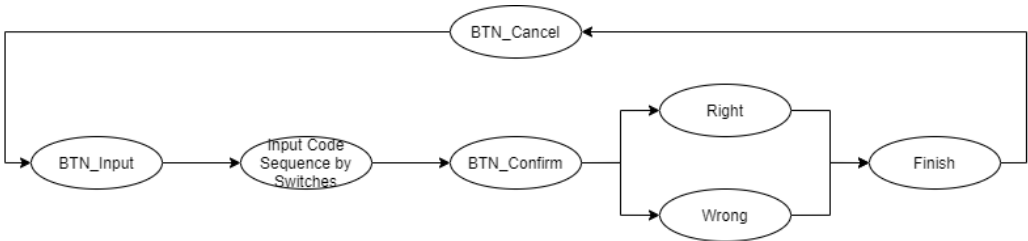## Hardware Specification

- **RESET**: Reset all value, code sequence and password

- **Buttons**: Use button to entry differnet function (mode).

    - **UP**: Normal input mode
    - **Left**: Modify password mode, only working afer input right code sequence
    - **Center**: Confirm button, when user finfish input, push this button to confirm input code sequence.
    - **Right**: Forget password mode / Admain mode
    - **Down**: Cancel / exit button.

- **8 Dight 7 Segments**: Initial state will display "_"

- **Switches**: Push up then push down same switch, its means input one number

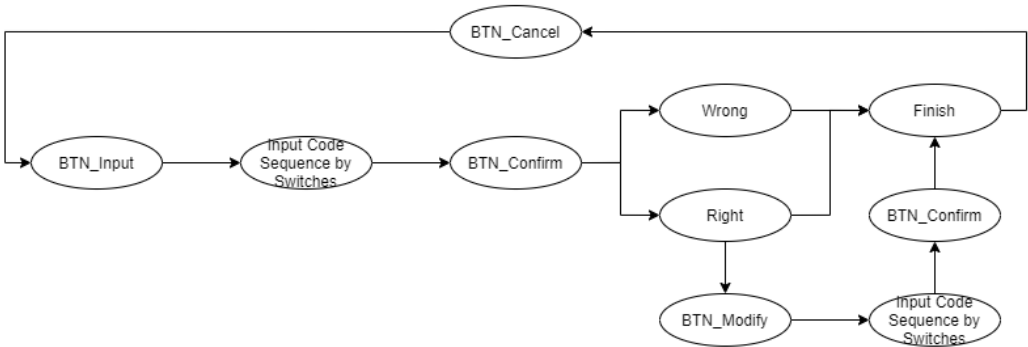   - *e.g*: push up switch [4] then push down, its means input deciaml number 4

input whole code sequence then push confirm (center) button
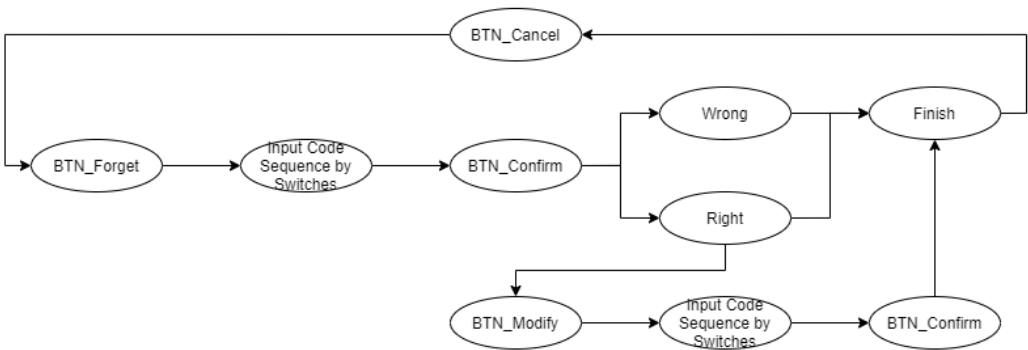
Button Function Specification

Normal Input Mode

Modity Password Mode

Forget Passowrd Mode

Use switches to input code sequence, push up and push down same switch mean input one number