Embedded Security Door System

***Low Level Design (LLD)***

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Architecture Design

# System constraints

1. Username and password are integers only
2. Max length for Username and password is 10 char
3. Max number for username and passwords is 10 users

# Pins connections

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Component** | **Microcontroller** | **Port(Pin)** | **Comment** |
| 1 | KeyPad | MC1 | PortD | 4 pins In – 4 pins out |
| 2 | LCD | MC1 | PortA – PortB(0:2) | PortA for data – PortB for control |
| 3 | Stepper Motor | MC1 | PortC(0:3) |  |
| 4 | Buzzer | MC1 | PortC(4) | 1 pin out |
| 5 | EEPROM | MC2 | PortC(0:1) |  |
| 6 | UART | MC2 | PortD(0:1) | PortD(0) In Rx - PortD(1) Out Tx |
| 7 | SPI | MC1 - MC2 | PortB(4:7) |  |

Functions Prototypes