Step by Step Process

Part 1: PREPARING THE CONNECTION

1. Using a soldering Iron set to 350deg. Celsius, solder some wires to the output pin of the components.
2. Solder some wires to the LCD pins: VCC, GND, SDA, and SCL. Add some shrinkable tubes or kapton tape to prevent pins from shorting with other components.
3. Solder some wires to the WIFI module pins: VCC, GND, RST, TX and RX. Add some shrinkable tubes or kapton tape to prevent pins from shorting with other components.
4. Solder some wires also to both pins of the buttons: RESET, SCAN, VIEW, UP, and DOWN. Add some shrinkable tubes or kapton tape to prevent pins from shorting with other components.
5. The next one to solder some wires is on the SD Card Module, the output pins involved are: 3.3, GND, CS, MOSI, MISO, and SCK. Add some shrinkable tubes or kapton tape to prevent pins from shorting with other components.
6. And Finally solder some wires to the RFID reader module, the involved pins are: VCC, RST, GND, MISO, MOSI and SCK. Add some shrinkable tubes or kapton tape to prevent pins from shorting with other components.

Part 2: PLACING THE COMPONENTS

1. Since the LCD will cover some spaces for the switches, the switches must be installed first. Make sure that its wires can connect to the Arduino later.
2. Install the RFID reader in place. This should also be done before installing the LCD.
3. You may now install the LCD, making sure that its wires can connect to the Arduino later.
4. Place the WIFI Module and Memory Card Reader Module in its place, while giving way to its wire to the Arduino.

Part 3: CONNECTING TO THE ARDUINO.

1. You may connect to the bottom side of the Arduino Mega’s PCB where the pins are soldered or you may install a male pin header for your connections.
2. First is to connect the LCD pins. Cut the wires to the appropriate length, in a way that nothing will snap when opened. Connect the VCC of the LCD to the 5V of the Arduino and GND to GND. Connect SDA to pin A4 and SCL pin to pin A5 of the Arduino.
3. Then connect the buttons to the Arduino. RESET button will be connected to Arduino pin 23, SCAN button to pin 25, VIEW button to pin 27, UP button to pin 29 and finally DOWN button to pin 31.
4. The next one to connect is the SD Card Module, connect the VCC of the SD Card Module to the 5V of Arduino, and GND to GND. Connect the Data pins of the SD Card Module to the Arduino; CS to pin 42, MOSI to pin 51, SCK to pin 52, MISO to pin 50.
5. Next is to connect the WIFI Module to the Arduino, since the WIFI Module only accepts 3.3V for its power, connect the VCC and RESET pins of the WIFI Module to the 3.3V pin of the Arduino and GND to GND. Then connect the TX and RX of the WIFI Module to pin 19 (RX1) and pin 18(TX1) of the Arduino respectively.
6. Finally, connect the RFID Module to the Arduino. Connect the VCC and GND pin of the RFID Module to 5V and GND of the Arduino respectively. Then connect the data pins; RST to pin 48, MISO to pin 50, MOSI to pin 51, and SCK to pin 52.

Part 4: CLOSING THE HOUSING

1. Before Closing the housing, make sure to align the wires neatly.
2. Load the Firmware.
3. Close the back cover of the housing. Done.