Temp.Monitoring Project

AMIT

Muhammad Asem

Features

-moving welcome screen until pressing on any button for a while

-password is written as '*' and is consisted of only six characters

-'*' button is used for digit delete and the '#' button is for password enter.

-The '#' button will not be active until all the six characters entered

-user is having only three times of tries to enter wrong password after that the system will be blocked for 5 seconds. If the user exceeds the number of wrong password tries more than one time the system blocking time is calculated via (n+1)*5 where n is the number of times that the user entering the
wrong password more than three times

-the system does not forget neither user wrong trials nor the saved password

- Capability of changing password through UART terminal and I will only accept numbers

- LM35 and TC72 Readings & current time via Real Time Clock Chip DS1307.

Muhammad Asem

```
start
  │
  ▼
Welcome Screen ◄──────┐
  │                   │
  ▼                   │ false
Keypad press ─────────┘
  │ true
  ▼
Please Enter Password ◄──────────────┐
  │                                   │
  ▼                                   │
EEPROM flag ──── Yes, default pass changed
  │                    │
  │ Default pass       ▼
  │              Read EEPROM saved Pass
  │                    │
  │                    ▼
  │              Load initial pass array with EEPROM pass
  │                    │
  ▼                    │
Read Password from KEYPAD ◄──┘
  │
  ▼
Pass match ──────────────────────────────┐
  │                                        │
  ▼ (no)                                   ▼
Error counter ++                    Do u need change pass ─┐
Save it to EEPROM                          │               │
  │                                        ▼               │
  ▼                                      Use uart ◄─────────┤
Error>3                                    │               │
  │                                        ▼               │
  ▼                                  All char are num. ─────┘
Delay by (n+1)*5                           │
                                           ▼
                                     Write to EEPROM
                                     set flag to true
                                           │
                                           ▼
                                     Display temp and clock
                                           │
                                           ▼
                                          end
```

- start
- Welcome Screen
- Keypad press — false / true
- Please Enter Password
- EEPROM flag — Yes, default pass changed / Default pass
- Read EEPROM saved Pass
- Load initial pass array with EEPROM pass
- Read Password from KEYPAD
- Pass match
- Error counter ++ Save it to EEPROM
- Error>3
- Delay by (n+1)*5
- Do u need change pass
- Use uart
- All char are num.
- Write to EEPROM set flag to true
- Display temp and clock
- end