T_passwordCheck

if Password == Current Password
   Open The Door
else
   Try agian for 3 times

if wrong for 3 times
   Turn on the alarm

Pass wrong

password MailBox

T_PasswordGet

Get password from user
if keypressed == '#'
   Send to MailBox

T_FireDetect

if detect fire
   set E_FireDetect
   set E_AlarmDisp

T_FireAlarmAction

if E_fireDetect == 1
   Turn on fire alarm and fire pump
   Send emergency message
else
   turn off fire alarm and fire pump

Fire sensed

Send emergency message

T_UserInput

if systemstate==Main
  keypressed=='#'
   set E_GetPassDisp
   Give semaphre for pass
if systemstate==Main
  keypressed=='*'
   set E_TempConfigDisp
   Give semaphre for temp

press #

T_MQTTPuplish

IoT sensor

EventGroups

-E_CTempUpdate
-E_ThresholdTempUpdate
-E_CMoistUpdate
-E_CHUMUpdate
-E_CLightUpdate
-E_GetPassDisp
-E_FireDetect
-E_FireAlarmDisp
-E_TempConfigDisp
-E_MainDisp

EVENT FLAGS

Take fire action

press *

Take (soil or light) action

T_TempRead

if ctemp changed
   set E_CTempUpdate
   GiveSmaphre(bsTempCheck)

Temperature Changed

T_TempThreshold

Get temp from user
set E_ThresholdTempUpdate
keypressed=='#'
   set E_MainDisp

T_DisplayData

Desplay Current State on LCD

Take temp action

T_TempAction

if current temp > temp threshold
   turn on fan
else
   turn off fan

Moisture or Light Change

T_SOIL_LIGHT_Action

if take moist semaphore
  if(cmoist<=30)
   turn on water pump
  else
   turn off water pump
if take light semaphore
  if(Clight<30)
   turn on OuterLight
  else
   turn off OuterLight

T_MQTTReceive

IoT actuator

MQTT QUEUE

T_CHECK_MQTT_Receive

if data == 1
   turn on TV
else
if data == 2
   turn off TV
     .
     .
     .

T_SOIL_LIGHT_Input

if sesor reding!=CMoist
   Cmoist=sesoreading
   set E_CMoistUpdate
   Give semaphorefor Moist
if sesor reding!=CLight
   Cmoist=sesoreading
   set E_CLightUpdate
   Give semaphorefor Light

Fire TV

IoT thing lightbulb

IOT SMART_HOME TASK