

Modules diagram

LED
+LED_State : LED_STATE_t
+LED_Init(void) : void
+LED_Update(void) : void

HEATER
+HEATER_State : HEATER_STATE_t
+ HEATER_Init(void) : void
+ HEATER_Update(void) : void

FAN
+FAN_State : FAN_STATE_t
+ FAN_Init(void) : void
+ FAN_Update(void) : void

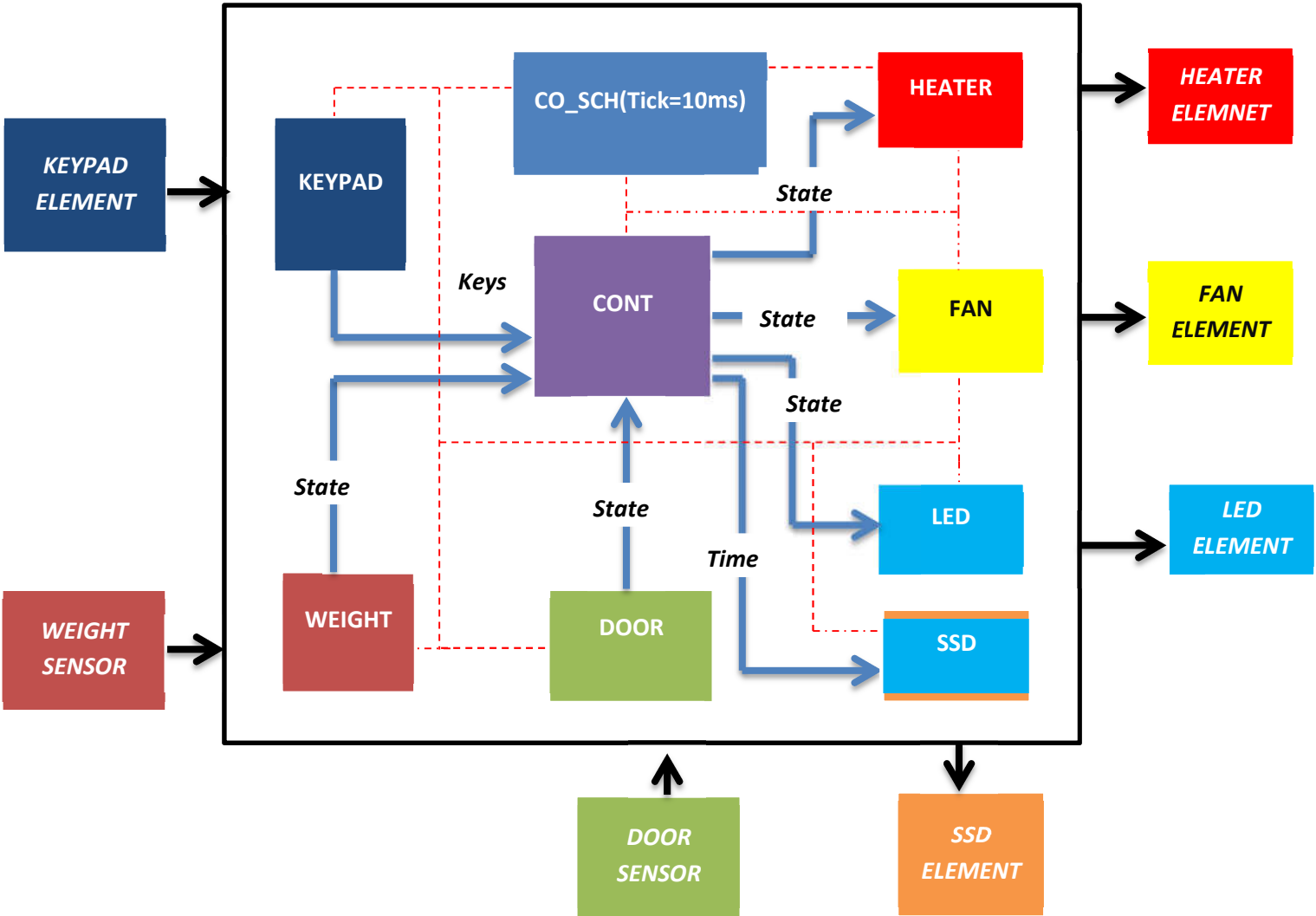
SSD
+Hours_Tens : u8_t
+Hours_Units : u8_t
+Minutes_Tens : u8_t
+Minutes_Units : u8_t
-SSD_Id : SSD_t
+ SSD_Init(void) : void
+ SSD_Update(void) : void
-SSD_On(SSD_ID : const SSD_t) : void
-SSD_Off(SSD_ID : const SSD_t) : void
-SSD_Refresh(void) : void

DOOR
+DOOR_State : DOOR_STATE_t
+DOOR_Init(void) : void
+DOOR_Update(void) : void

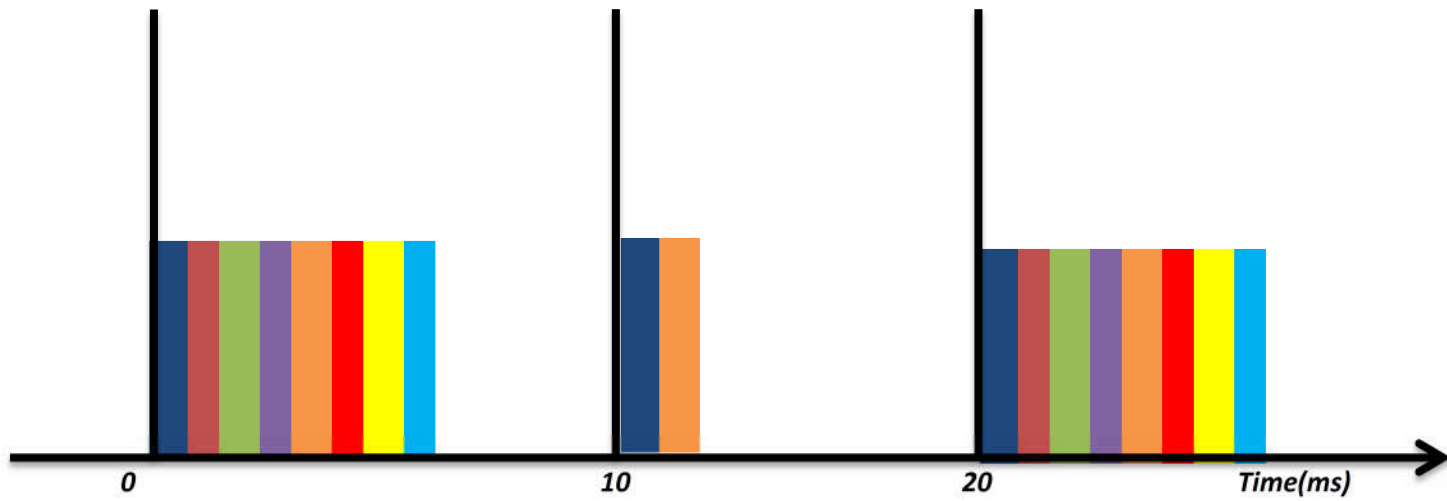
WEIGHT
+ WEIGHT_State : WEIGHT_STATE_t
+ WEIGHT_Init(void) : void
+ WEIGHT_Update(void) : void

KEYPAD
+Key_Pressed_g : KEY_ID_t
- Key[MAX_NO_OF_KEYS] : KEY_t
+ KEYPAD_Init(void) : void
+ KEYPAD_Update(void) : void
- KEYPAD_Update_Key(KEY_ID : const KEY_ID_t) : void
- KEYPAD_Scelect_Key(ROW : const ROW_t, COL : const COL_t, KEY_ID : const KEY_ID_t) : void

CONT
-CONT_Mode: CONT_MODE_t
+ CONT_Init(void) : void
+ CONT_Update(void) : void



Time modeling



Task	Action	BCET (ms)	WCET (ms)	Periode Of Action (ms)	Periode Of Task (ms)
KEYPAD_Update	Update_Buttons	0.477	0.492	10	10
WEIGHT_Update	Update_Weight_State	0.093	0.107	20	20
DOOR_Update	Update_Door_State	0.090	0.107	20	20
CONT_Update	Control the States of the modules	0.031	0.096	20	20
SSD_Update	Update_Time	0.767	0.767	10	10
HEATER_Update	Update_Heater_State	0.108	0.108	20	20
FAN_Update	Update_Fan_State	0.103	0.103	20	20
LED_Update	Update_Led_State	0.099	0.099	20	20
TICK(ms)					10
Major Cycle(ms)					20

Minor Cycle = TICK = GCD(10, 20, 20, 20, 10, 20, 20, 20) = 10 ms

Major Cycle = LCM(10, 20, 20, 20, 10, 20, 20, 20) = 20 ms

Major Cycle = 20 / 10 = 2 Minor Cycle

CPU Load = $\sum WCET / \text{Major Cycle} = 1.879/20 = 0.09395$

CPU Load % = 0.09395 * 100 = 9.395 %

