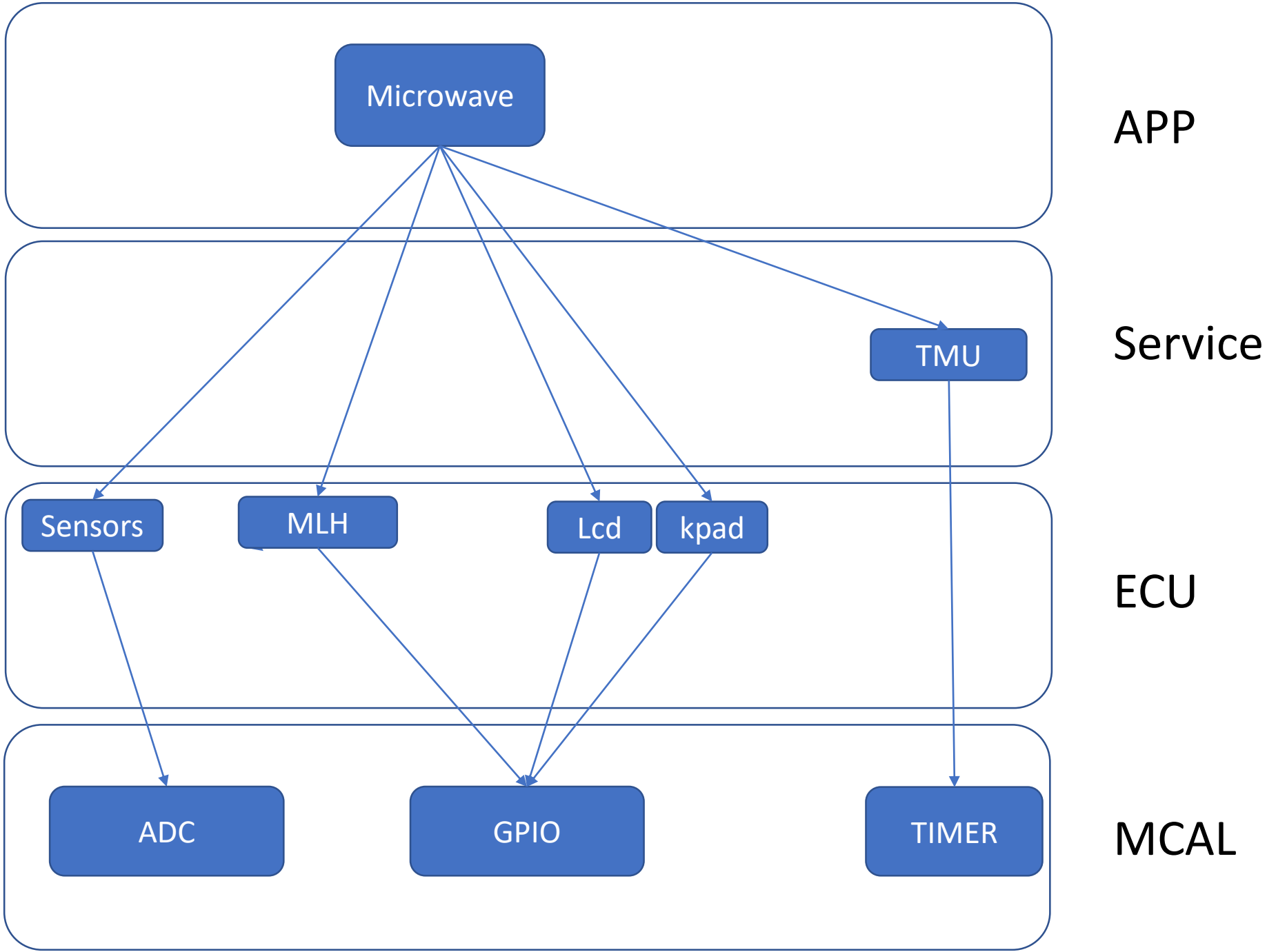
Static Design



APP$_{Microwave}$

Function	type
void Microwave_init(void)	Initialization
Void Microwave_GetInputs_Cbk(uint8 key)	Call back from keypad
Void Microwave_UpdateTime_Cbk (void)	Call back from TMU
void Microwave_MainFanction(void)	Periodic

Service $_{TMU}$

Function	type
Void TMU_init(void(*P2F)(uint8)))	Initialization
Void TMU_TriggerEvent (void)	Global function
Void TMU_EndEvent(void)	Global function
Void TMU_MainFunction(Void)	Periodic
Void TMU_Cbk(void)	Global Function

ECU Keypad

Function	type
Void kpad_init(void (*P2F)(uint8))	Initialization
Void keyPad_MainFunction (Void)	Periodic

ECU_{Lcd}

Function	type
Void Lcd_init(void)	Initialization
Void Lcd_char(uint8 chr)	Global Function
Void Lcd_str(uint8* str)	Global Function
Void Lcd_Goto(uint8 x, uint8 y)	Global Function
Void Lcd_num(uint32 num)	Global Function

ECU$_{ECUS}$

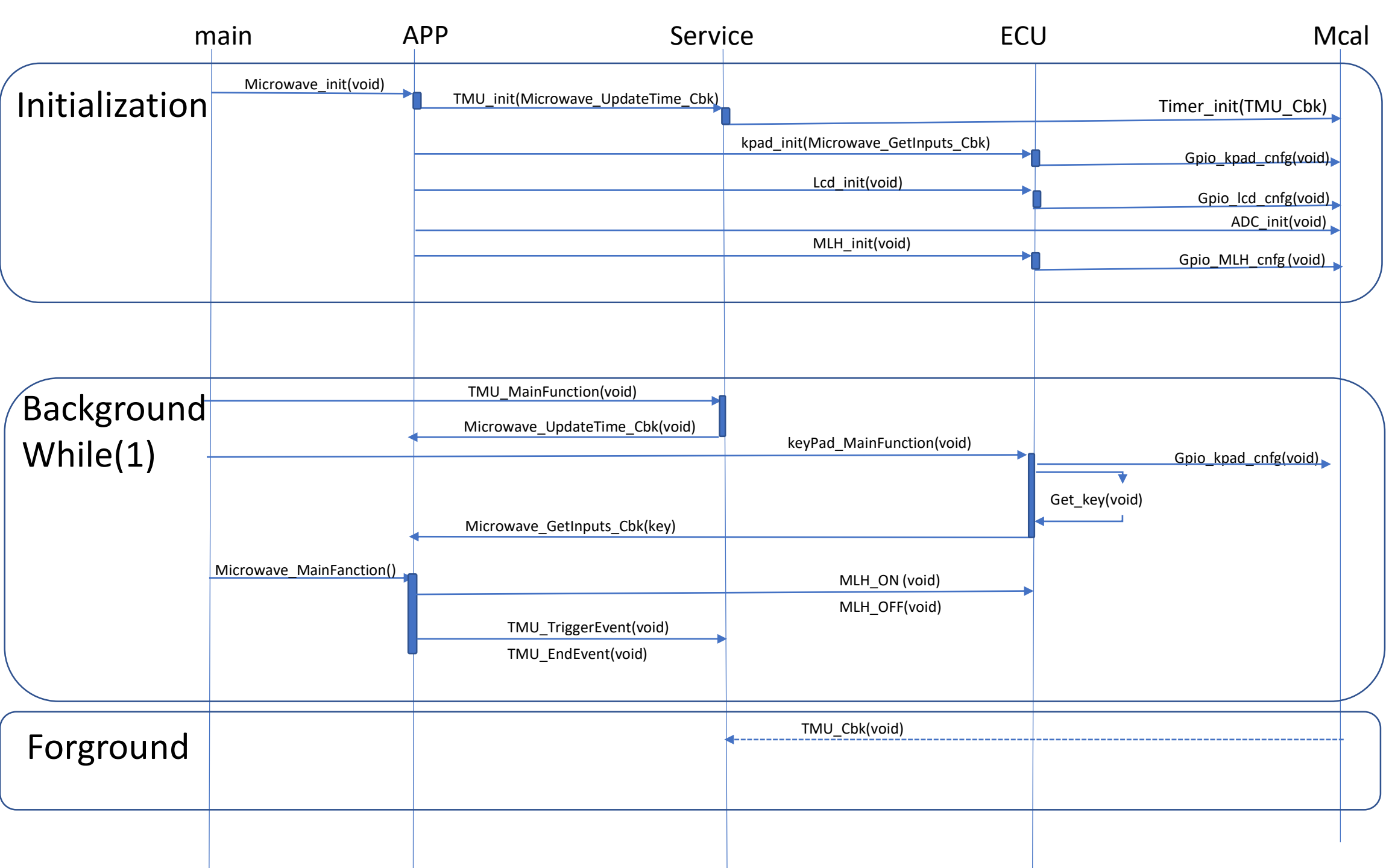
Function	type
Void BAZZER_init(void)	Initialization
void BAZZER_ON ()	Global Function
void BAZZER_OFF()	Global Function
Void MLH_init(void)	Initialization
void MLH_ON ()	Global Function
void MLH_OFF()	Global Function

MCAL$_{Timer}$

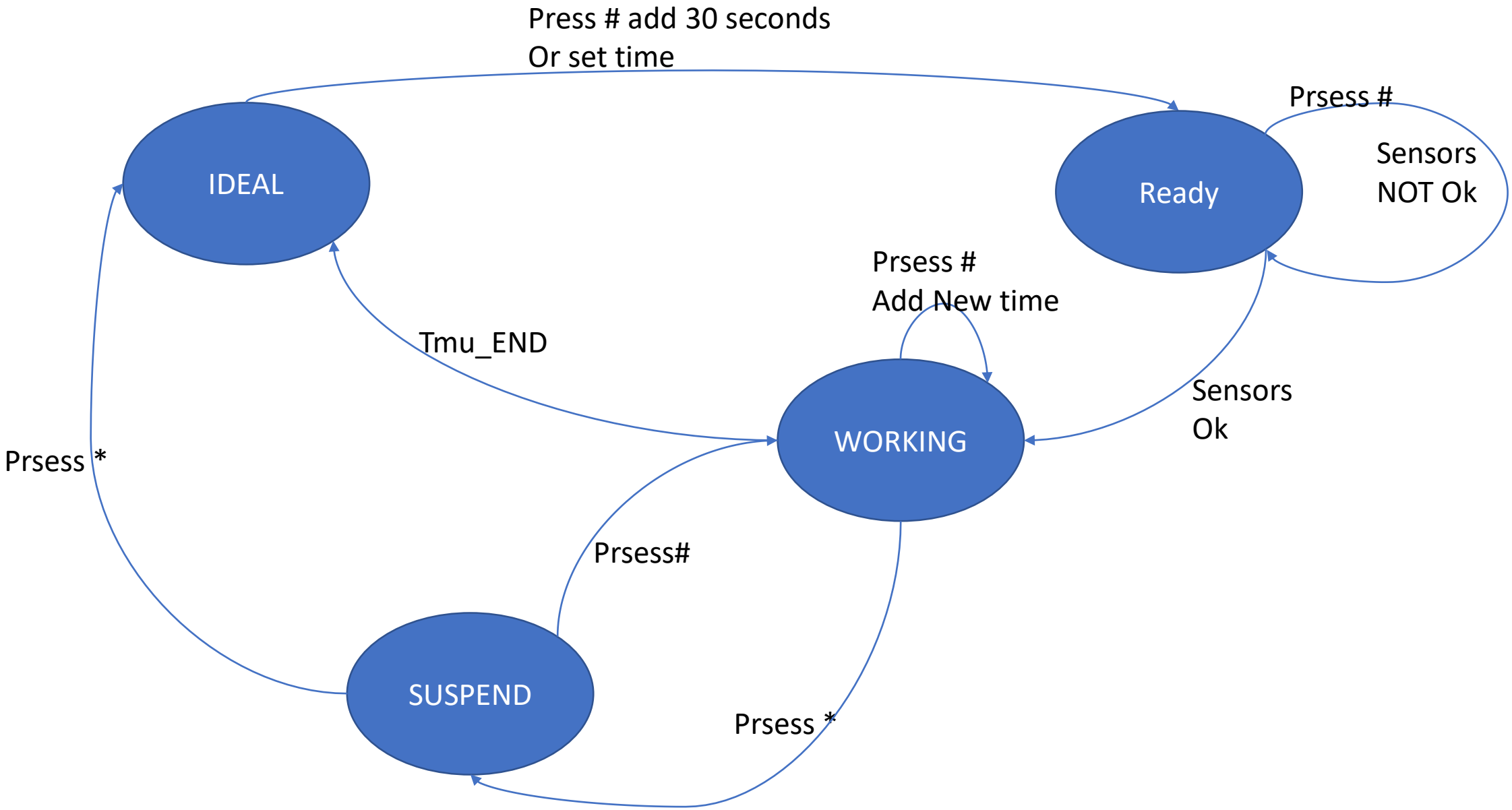
Function	type
Void Timer_init(void)	Initialization
Void Timer_ISR (void)	ISR Function
Void Timer_Start(void)	Global Function
Void Timer_Stop(void)	Global Function

MCAL Gpio

Function	type
Void Gpio_lcd_cnfg(void)	Initialization
Void Gpio_kpad_cnfg(void)	Private Function


main
APP
Service
ECU
Mcal
Initialization
Microwave_init(void)
TMU_init(Microwave_UpdateTime_Cbk)
Timer_init(TMU_Cbk)
kpad_init(Microwave_GetInputs_Cbk)
Gpio_kpad_cnfg(void)
Lcd_init(void)
Gpio_lcd_cnfg(void)
ADC_init(void)
MLH_init(void)
Gpio_MLH_cnfg (void)
Background
While(1)
TMU_MainFunction(void)
Microwave_UpdateTime_Cbk(void)
keyPad_MainFunction(void)
Gpio_kpad_cnfg(void)
Get_key(void)
Microwave_GetInputs_Cbk(key)
Microwave_MainFanction()
MLH_ON (void)
MLH_OFF(void)
TMU_TriggerEvent(void)
TMU_EndEvent(void)
Forground
TMU_Cbk(void)

Microwave state machine



Type	Assumption
Microcontroller	PIC18F4620
Working frequency	16 MHZ
Start button	‘#’
Stop button	‘*’
Weight sensor	Pot. P1
Door sensor	Pot. P2