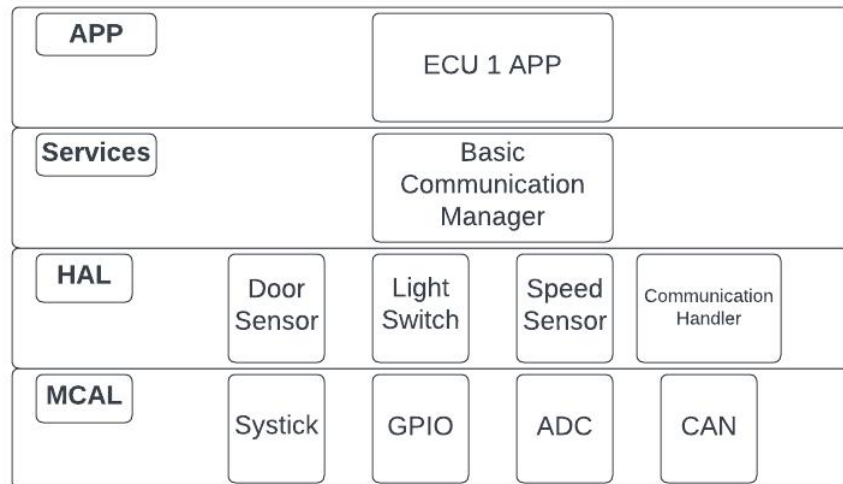


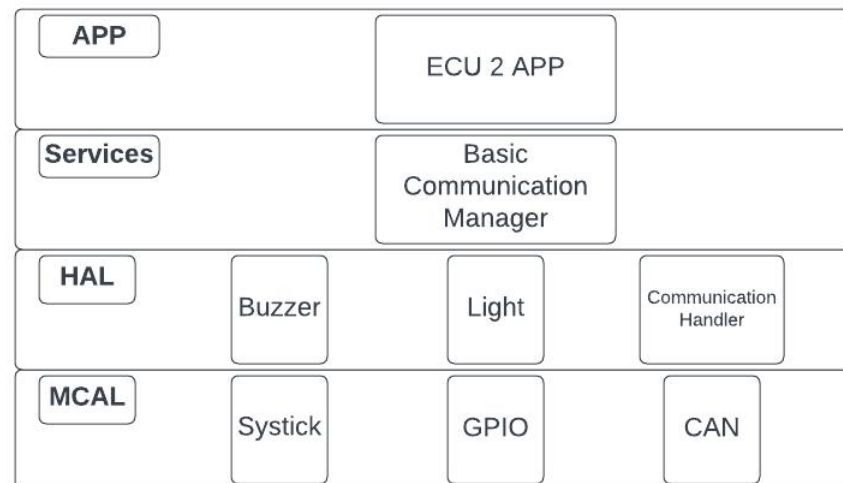
Static Design

Layered Architecture including components and modules.

ECU 1:



ECU 2:



APIs

API		GPIO_init	
Description		Initialize the GPIO module	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		GPIO_read	
Description		Read the required pin	
Reentrancy	Non-Reentrant	Parameter	Gpio_ChannelType ChannelId
Sync	Synchronous	Return	LevelType

API		GPIO_write	
Description		Write a value to the required pin	
Reentrancy	Non-Reentrant	Parameter	Gpio_ChannelType ChannelId, Gpio_LevelType Level
Sync	Synchronous	Return	None

API		STK_init	
Description		Initialize the SysTick module	
Reentrancy	Non-Reentrant	Parameter	MACRO CLK_SOURCE
Sync	Synchronous	Return	None

API		ADC_init	
Description		Initialize the ADC module	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		ADC_read	
Description		Reads the required channel value	
Reentrancy	Non-Reentrant	Parameter	Adc_ChannelType ChannelID
Sync	Synchronous	Return	Adc_ValueType Value

API		ADC_startConversion	
Description		Starts the conversion of a channel	
Reentrancy	Non-Reentrant	Parameter	Adc_ChannelType ChannelID
Sync	Synchronous	Return	None

API		CAN_init	
Description		Initialize the CAN module	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		CAN_send	
Description		Sends the required message	
Reentrancy	Non-Reentrant	Parameter	Can_ValueType Message - Can_IdType ID
Sync	Synchronous	Return	None

API		CAN_receive	
Description		Receives the required message	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	Can_ValueType Message

API		DoorSensor_init	
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Description		Initialize the Door Sensor	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		LightSwitch_init	
Description		Initialize the Light Switch	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		SpeedSensor_init	
Description		Initialize the Speed Sensor	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		DoorSensor_status	
Description		Read status of the door sensor	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	Door status

API		LightSwitch_status	
Description		Read status of the light switch	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	uint8 status

API		SpeedSensor_status	
Description		Read status of the speed sensor	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	uint32 Speed

API		Light_init	
Description		Initialize lights module	

Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		Light_ON	
Description		Turn lights ON	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		Light_OFF	
Description		Turn lights ON	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		Buzzer_init	
Description		Initialize Buzzer module	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		Buzzer_ON	
Description		Turn buzzer ON	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		Buzzer_OFF	
Description		Turn Buzzer OFF	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		ECU1_sendDoorStatus	
Description		Send door status to ECU2	

Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		ECU1_sendSwitchStatus	
Description		Send door status to ECU2	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		ECU1_sendSpeedStatus	
Description		Send door status to ECU2	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	None

API		ECU2_receiveStatus	
Description		Send door status to ECU2	
Reentrancy	Non-Reentrant	Parameter	None
Sync	Synchronous	Return	Status