**Moving Car System Design**

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**System layered architecture:**

* Application
* ECUAL: Electronic Unit Application Layer, For Drivers
* MCAL: Microcontroller Application Layer
* Microcontroller

**Specify system modules/drivers**

* Motor (4 Motors) - ECUAL
* Button (2 Buttons) - ECUAL
* LED (4 LEDs) - ECUAL
* Timer - MCAL
* DIO - MCAL
* PWM - MCAL

API’s

Motors

|  |
| --- |
| EN\_DCM\_ERROR\_t DCM\_init(ST\_DCM\_t \* dcm);  EN\_DCM\_ERROR\_t DCM\_start(ST\_DCM\_t \* dcm,uint8 speed);  EN\_DCM\_ERROR\_t DCM\_stop(ST\_DCM\_t \* dcm); |

Button

|  |
| --- |
| EN\_BTN\_ERROR\_t BTN\_init(ST\_BUTTON\_t \* btn);  EN\_BTN\_ERROR\_t BTN\_status(ST\_BUTTON\_t \* btn,uint8 \*status); |

FLOWCAHRTSDiagram

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