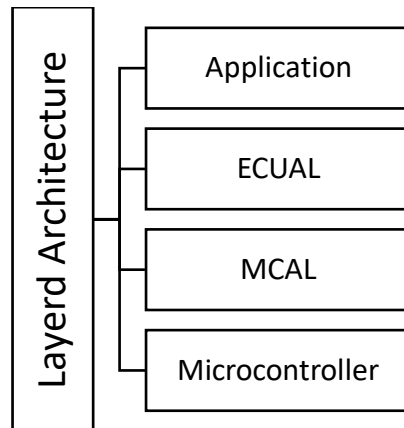


Moving Car System Design

Youssef Ahmed Abbas

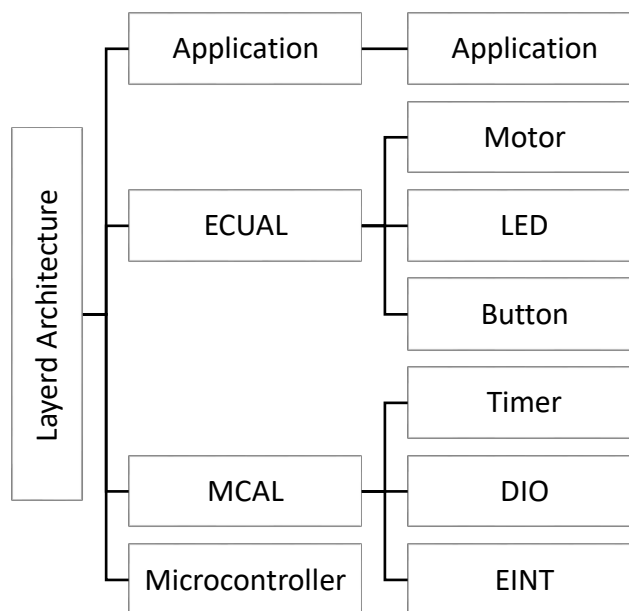
System layered architecture:

- 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);
```

FLOWCAHRTS

