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**Door System**

Documentation

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**Document Status**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Status** | **Author** | **Date** |
| V 1.0 | Draft | Mina Yousry | 27/2/2020 |

**Document History**

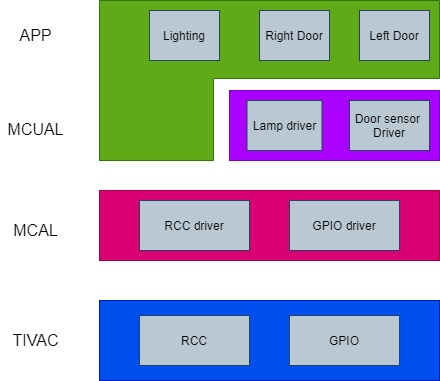
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| **Version** | **Author** | **Date** | **Change** |
| V 1.0 | Mina Yousry | 27/2/2020 | Initial creation |

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**Project Description:**

**layered Architecture:**

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### **System APIs:**

**APP:**

**Left door**

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status LeftDoor\_init(void) | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status LeftDoor\_GetStatus(uint8\_t \*DoorStatus) | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

**Lighting:**

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status Lighting\_init(void); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status Lighting\_Control(uint8\_t LampState); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

**Right door:**

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status RightDoor\_init(void); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status RighttDoor\_GetStatus(uint8\_t \*DoorStatus); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

**ECUAL:**

**Door Sensor**

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status DoorSensor\_Init(void); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status DoorSensor\_ReadStatus(uint8\_t Sensor\_Ch, uint8\_t\*state); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

**Lamp**

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status Lamp\_Init(void); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status Lamp\_Update(uint8\_t Lamp\_Ch, uint8\_t State); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

**MCAL:**

**RCC:**

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status RRC\_EnablePreph(preph\_t Preph); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

**GPIO:**

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status GPIO\_Init(uint8\_t Port, uint8\_t Pin, uint8\_t Mode); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status GPIO\_ReadPin(uint8\_t Port, uint8\_t Pin, uint8\_t \* Value); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |

|  |  |  |  |
| --- | --- | --- | --- |
| **API** | Error\_Status GPIO\_WritePin(uint8\_t Port, uint8\_t Pin, uint8\_t Value); | | |
| **Description** |  | | |
| **Inputs** | Door Sensor | outputs | Lamp |