**CDD**

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| Version | Author | Changes | Status |
| 1.1 | Bishoy | Initial version | Reviewed |
| 1.2 | Basma | Modified | Released |

**Description:**

This is the component design document of the project. It depends on the GDD as it extracts the info from it.

- u8 LCD\_init(void);

- u8 LCD\_ClearLCD (void);

- u8 LCD\_LcdWrite(8uCopy\_ u8value ,u8 Copy\_u8Position);

- LCD\_Command();

**Req\_CDD\_ID\_2**

Covers: **GDD\_ID\_5, GDD\_ID\_6, GDD\_ID\_7**

Call the function DIO\_u8SetPinValue()

To make RW pin low on the LCD (write)

Call the function DIO\_u8SetPortValue()

To send the 8-bit command data to the 8-bits of the LCD

Call the function DIO\_u8SetPinValue()

To make RS pin low on the LCD (command register)

Call the function DIO\_u8SetPinValue()

To make EN pin high on the LCD

Call the function DIO\_u8SetPinValue()

To make EN pin low on the LCD

Call the function Delay\_us()

And give it an accepted delay

Call the function Delay\_ms()

And give it an accepted delay

Call the function DIO\_u8SetPinDirection

three times to make three pins as output to pins RS, RW and EN on LCD

Call the function LCD\_Command()

And give it 0x38 as input to Initialize 16X2 LCD in 8-bit mode

Call the function DIO\_u8SetPortDirection()

To make specific port as output to 8 pins on LCD (D0-D7)

Call the function LCD\_Command()

And give it 0x0C as input to make the display on & the cursor off

Call the function LCD\_Command()

And give it 0x01 as input to clear display screen

Call the function LCD\_Command()

And give it 0x06 as input to   
Increment cursor (shift cursor to right)

Call the function LCD\_Command()

And give it 0x80 as input to   
Force cursor to beginning of first line

- LCD\_Write\_Char()

Call the function DIO\_u8SetPortValue()

To send the 8-bit command data to the 8-bits of the LCD

Call the function DIO\_u8SetPinValue()

To make RS pin high on the LCD (data register)

Call the function DIO\_u8SetPinValue()

To make RW pin low on the LCD (write)

Call the function DIO\_u8SetPinValue()

To make EN pin low on the LCD

Call the function Delay\_us()

And give it an accepted delay

Call the function DIO\_u8SetPinValue()

To make EN pin high on the LCD

Call the function Delay\_ms()

And give it an accepted delay