

High level design

Module description

LCD module

The LCD module is responsible for the initialization of the pins connected to the LCD and controls the LCD itself.

LCD driver documentation

```
/**
 * @brief Initializes the pins connected to the LCD display, clears the display,
 * and sets the cursor to the home position.
 */
void LCD_init(void);

/**
 * @brief Sends a command to the LCD display.
 * @param[in] lcd_command The specified command to be sent to the LCD.
 */
void LCD_sendCommand(uint8 lcd_command);

/**
 * @brief Displays the specified character on the LCD display.
 * @param[in] character The selected character to be displayed.
 */
void LCD_displayCharacter(uint8 character);

/**
 * @brief Displays a whole string on the LCD.
 * @param[in] string Address of the string to be displayed on the LCD.
 */
void LCD_displayString(uint8 *string);

/**
 * @brief Stores a custom character in the CGRAM.
 * @param custom_character[in] Address of the bitmap representation of the
character to be created.
 * @param cgram_location[in] Location in CGRAM to write the custom character in.
 */
```

```

void LCD_createCustomCharacter(uint8 *custom_character, uint8 cgram_location);

/**
 * @brief Moves the cursor to a specific row and column on the LCD display.
 * @param row The specified row, either row 0 or row 1.
 * @param col The specified column from 0 to 15.
 */
void LCD_moveCursor(uint8 row, uint8 col);

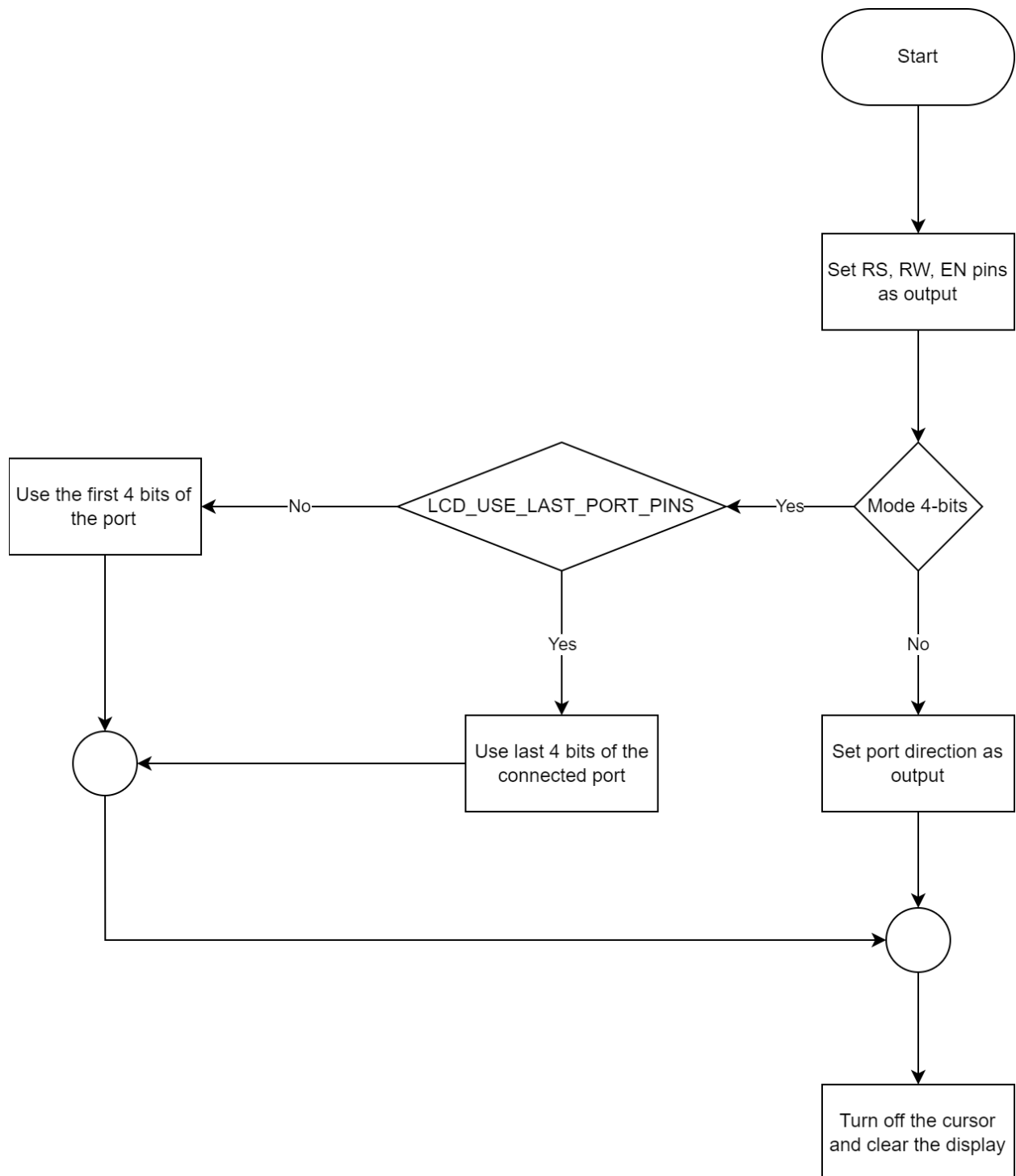
```

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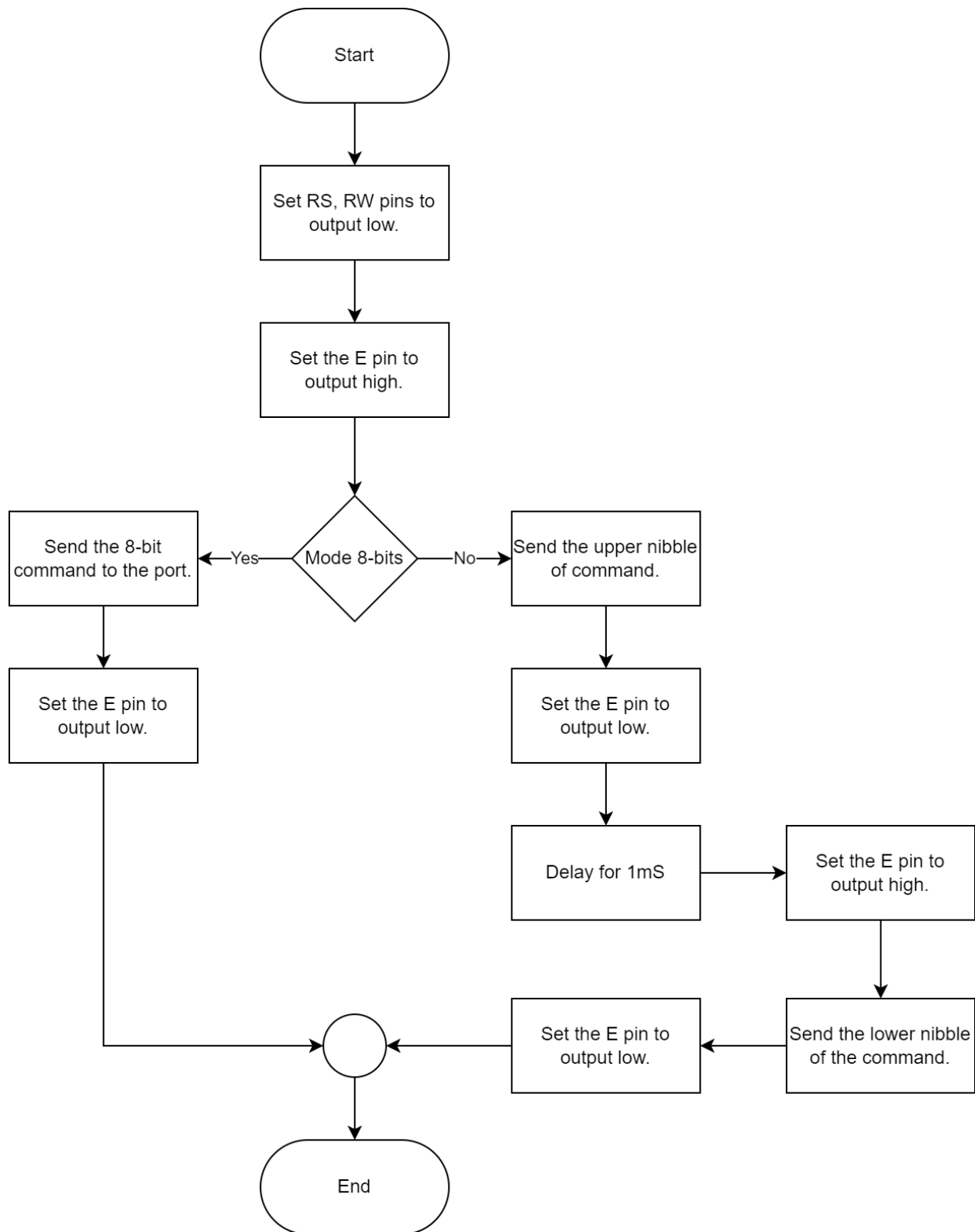
LCD module

1. void LCD_init(void);
2. void LCD_sendCommand(uint8 lcd_command);
3. void LCD_displayCharacter(uint8 character);
4. void LCD_displayString(uint8 *string);
5. void LCD_createCustomCharacter(uint8 *custom_character, uint8 cgram_location);
6. void LCD_moveCursor(uint8 row, uint8 col);

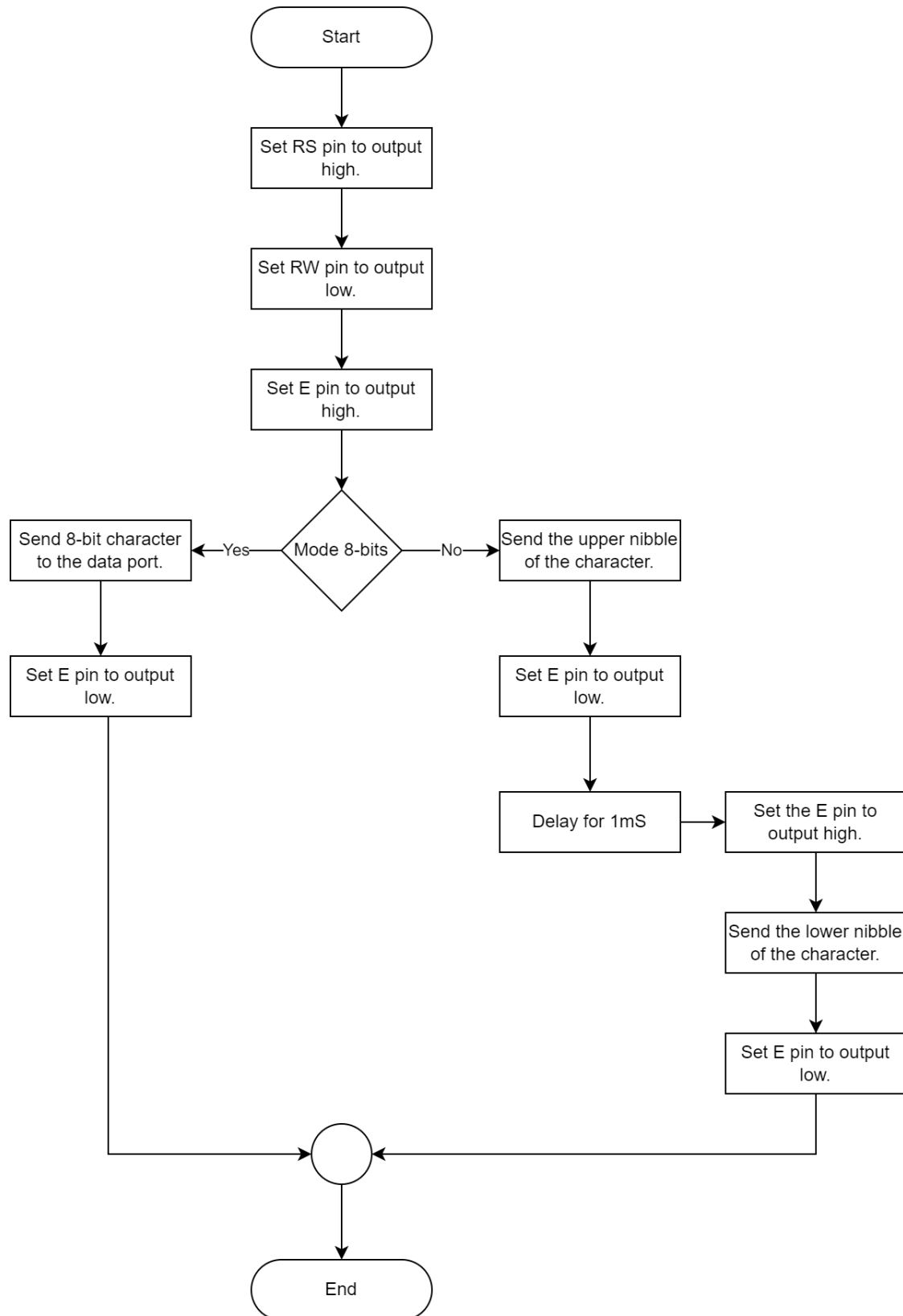
```
void LCD_init(void);
```



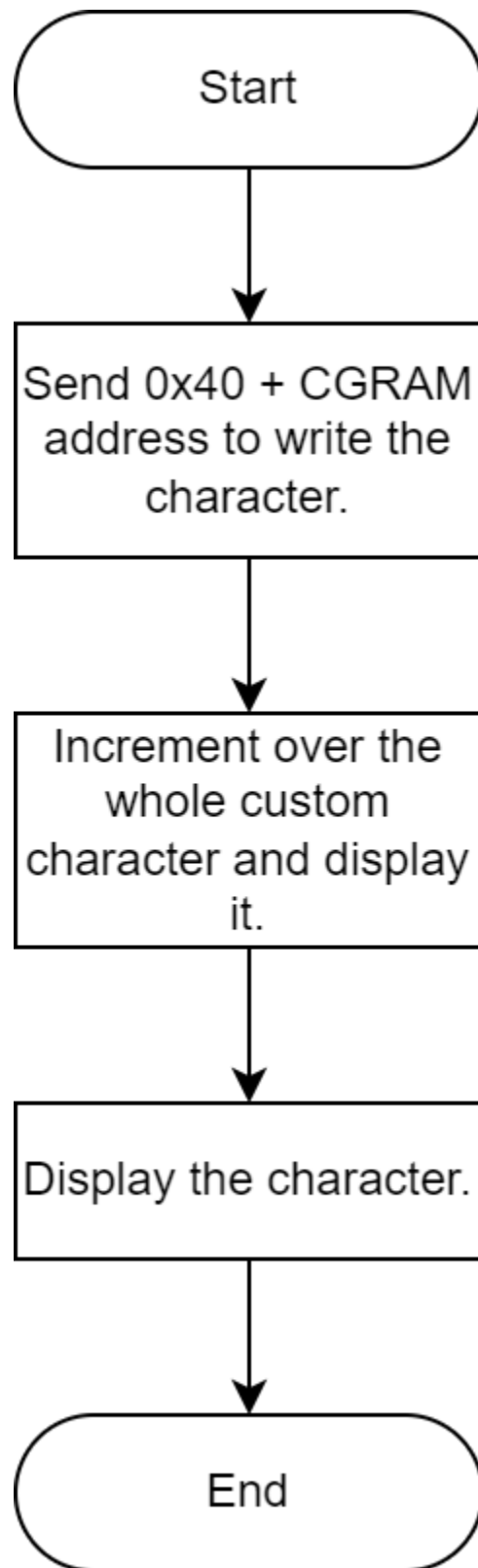
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