```c
/***************************************************************************
 *
 *    _____    _____   ____  ____    ____  _____     _____
 *   |_   __ \  |_   _ \ |_  _||_  _|  |_   ||_   _|    |_   __ \.'    \
 *     | |__) |   | |_) |  \ \  / /      \ \  / /        | |__) |  (___ \_|
 *     |  ___/    |  __'.   \ \/ /        \ \/ /         |  ___/  _.____`.
 *    _| |_      _| |__) |  _|  |_        _|  |_        _| |_    | \____) |
 *   |_____|    |_____|  |____||____|  |_____|      |_____|    _____.'
 *
 ***************************************************************************
 *
 * File        : app.h
 * Version     : 1.0
 *
 ***************************************************************************
 *
 * Description  : Managing global state machine
 *
 ***************************************************************************
 *
 * Author      : Miguel Santos
 * Date        : 25.09.2023
 *
 ***************************************************************************
 *
 * MPLAB X      : 5.45
 * XC32         : 2.50
 * Harmony      : 2.06
 *
 ***************************************************************************/

#ifndef _APP_H
#define _APP_H

/***************************************************************************/

#include <stdint.h>
#include <stdbool.h>
#include <stddef.h>
#include <stdlib.h>
#include "system_config.h"
#include "system_definitions.h"
#include "modules/counter.h"

/***************************************************************************/

/* Application states */
typedef enum
{
    APP_STATE_INIT,
    APP_STATE_IDLE,
    APP_STATE_SETUP_WIFI,
    APP_STATE_SETUP_RFID,
    APP_STATE_ASKING,
    APP_STATE_OFF,
    APP_STATE_ON,

} APP_STATES;

/***************************************************************************/

/* Structure to hold application data */
typedef struct
{
    /* The application's current state */
    APP_STATES state;

    /* Timeout counter used to turn off output */
    S_Counter timeOut;

} APP_DATA;

/***************************************************************************/
```

```c
 74    /**
 75     * @brief APP_Initialize
 76     *
 77     * Initialize APP state machine
 78     *
 79     * @param void
 80     * @return void
 81     */
 82    void APP_Initialize ( void );
 83
 84    /*****************************************************************************/
 85
 86    /**
 87     * @brief APP_Tasks
 88     *
 89     * Execute APP state machine, should be called cyclically
 90     *
 91     * @param void
 92     * @return void
 93     */
 94    void APP_Tasks ( void );
 95
 96    /*****************************************************************************/
 97
 98    #endif /* _APP_H */
 99
100    /* End of File *****************************************************************/
101
```