Course_work_IoT

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2.2 D:/KPI/pic32/cource_work_iot.X/main.c File Reference

```
#include <stdint.h>
#include <stdbool.h>
#include "user.h"
```

Functions

- int32_t main (void)

  Initialize I/O and Peripherals for application Setup functionality and port direction.

2.2.1 Function Documentation

2.2.1.1 main()

```
int32_t main (
            void  )
```

Initialize I/O and Peripherals for application Setup functionality and port direction.

Parameters

out	*none*	
in	*none*	

Returns

none

2.3 D:/KPI/pic32/cource_work_iot.X/UART.c File Reference

```
#include "UART.h"
```

Functions

- void uart4_init (void)
- char uart4_getc (void)
- void uart4_putc (char c)
- void uart4_puts (char *s)
- void uart4_test (void)

2.3.1 Function Documentation

2.3.1.1 uart4_getc()

```
char uart4_getc (
            void  )
```

Function prototype:

void uart4_getc(void);

Description:

read char symboll from UART

Parameters:

none

Returns:

none

2.3.1.2 uart4_init()

```
void uart4_init (
             void  )
```

Function prototype:

void uart4_init(void);

Description:

initialize UART

Parameters:

none

Returns:

none

2.3.1.3 uart4_putc()

```
void uart4_putc (
             char c )
```

Function prototype:

void uart4_putc(char c);

Description:

put char symboll to UART

Parameters:

char symbol 'c'

Returns:

none

2.3.1.4 uart4_puts()

```
void uart4_puts (
             char * s )
```

Function prototype:

void uart4_puts(char *s);

Description:

put char array to UART

Parameters:

char array 's'

Returns:

none

2.3.1.5 uart4_test()

```
void uart4_test (
            void  )
```

Function prototype:

void uart4_test(void);

Description:

UART test and beginning program

Parameters:

none

Returns:

none

2.4 D:/KPI/pic32/cource_work_iot.X/UART.h File Reference

```
#include <xc.h>
```

Functions

- void uart4_init (void)
- char uart4_getc (void)
- void uart4_putc (char c)
- void uart4_puts (char *s)
- void uart4_test (void)

2.4.1 Function Documentation

2.4.1.1 uart4_getc()

```
char uart4_getc (
            void  )
```

Function prototype:

void uart4_getc(void);

Description:

read char symboll from UART

Parameters:

none

Returns:

none

2.4.1.2 uart4_init()

```
void uart4_init (
             void  )
```

Function prototype:

void uart4_init(void);

Description:

initialize UART

Parameters:

none

Returns:

none

2.4.1.3 uart4_putc()

```
void uart4_putc (
             char c )
```

Function prototype:

void uart4_putc(char c);

Description:

put char symboll to UART

Parameters:

char symbol 'c'

Returns:

none

2.4.1.4 uart4_puts()

```
void uart4_puts (
             char * s )
```

Function prototype:

void uart4_puts(char *s);

Description:

put char array to UART

Parameters:

char array 's'

Returns:

none

2.4.1.5 uart4_test()

```
void uart4_test (
            void  )
```

Function prototype:

void uart4_test(void);

Description:

UART test and beginning program

Parameters:

none

Returns:

none

2.5 D:/KPI/pic32/cource_work_iot.X/user.c File Reference

```
#include <stdint.h>
#include <stdbool.h>
#include <string.h>
#include "user.h"
#include <sys/attribs.h>
#include "UART.h"
```

Functions

- void InitGpio (void)

  Initialize input output Setup functionality and port direction.
- void InitApp (void)

  peripherals initialization
- void ControlStateMachine ()

  state machine for control LED's by Bluetooth This function looks like state machine, has 2 states all LED's turned ON and all LED's turned OFF. State machine controls by Bluetooth and UART

2.5.1 Function Documentation

2.5.1.1 ControlStateMachine()

```
void ControlStateMachine (
            void  )
```

state machine for control LED's by Bluetooth This function looks like state machine, has 2 states all LED's turned ON and all LED's turned OFF. State machine controls by Bluetooth and UART

Parameters

out	*none*	
in	*none*	

Returns

none

2.5.1.2 InitApp()

```
void InitApp (
              void  )
```

peripherals initialization

Parameters

out	*none*	
in	*none*	

Returns

none

2.5.1.3 InitGpio()

```
void InitGpio (
              void  )
```

Initialize input output Setup functionality and port direction.

Parameters

out	*none*	
in	*none*	

Returns

none

2.6 D:/KPI/pic32/cource_work_iot.X/user.h File Reference

```
#include <stdint.h>
```

Macros

- #define LD1_PORT_BIT LATGbits.LATG6

  I/O macroses for PORT bits.
- #define LD2_PORT_BIT LATDbits.LATD4
- #define LD3_PORT_BIT LATBbits.LATB11
- #define LD4_PORT_BIT LATGbits.LATG15

Functions

- void InitApp (void)

  peripherals initialization
- void ControlStateMachine (void)

  state machine for control LED's by Bluetooth This function looks like state machine, has 2 states all LED's turned ON and all LED's turned OFF. State machine controls by Bluetooth and UART

2.6.1 Macro Definition Documentation

2.6.1.1 LD1_PORT_BIT

```
#define LD1_PORT_BIT LATGbits.LATG6
```

I/O macroses for PORT bits.

2.6.1.2 LD2_PORT_BIT

```
#define LD2_PORT_BIT LATDbits.LATD4
```

2.6.1.3 LD3_PORT_BIT

```
#define LD3_PORT_BIT LATBbits.LATB11
```

2.6.1.4 LD4_PORT_BIT

```
#define LD4_PORT_BIT LATGbits.LATG15
```

2.6.2 Function Documentation

2.6.2.1 ControlStateMachine()

```
void ControlStateMachine (
            void  )
```

state machine for control LED's by Bluetooth This function looks like state machine, has 2 states all LED's turned ON and all LED's turned OFF. State machine controls by Bluetooth and UART

Parameters

out	*none*	
in	*none*	

Returns

none

2.6.2.2 InitApp()

```
void InitApp (
             void  )
```

peripherals initialization

Parameters

out	*none*	
in	*none*	

Returns

none

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