**#include** <msp430.h>

**#include** "Motors\_JMP.h"

**#include** "Serial\_JMP.h"

**#include** "General\_JMP.h"

**#include** "typecast.h"

**#include** "MS5837-30BA.h"

**#define** **MSDELAY** 1999

/\*

\* main.c

\*/

**int** **main**(**void**) {

WDTCTL = WDTPW | WDTHOLD; // Stop watchdog timer

//I2C\_setup(400000); //Start I2C communication at 100k bps

**USB\_setup**(9600);

**MOTOR\_ultra\_setup**();

**BT\_timeout\_setup**(MSDELAY);

//PRESSURE\_calibrate();

\_BIS\_SR(GIE);

int32 pressure = 0;

int32 temp = 0;

**char** command;

**int** m1\_speed = 0;

**int** m2\_speed = 0;

**int** m3\_speed = 0;

**int** m4\_speed = 0;

**int** m5\_speed = 0;

**int** m6\_speed = 0;

**while**(1){

//PRESSURE\_start\_conversion();

//pressure = PRESSURE\_get\_pressure();

//temp = PRESSURE\_get\_temperature();

**USB\_print\_value**("", pressure);

**USB\_print\_value**(",", temp);

temp++; pressure++;

**USB\_println**("");

**BT\_restart\_timeout**();

**USB\_receive\_byte**(&command);

**BT\_stop\_timeout**();

/\* For Up and Down \*/

**if**(command != 0x00){

**if**(command == 'o'){

**if**(m1\_speed < MOTOR\_CAP){

m1\_speed+=5;

m2\_speed+=5;

m3\_speed+=5;

m4\_speed+=5;

}

}**else** **if**(command == 'l'){

**if**(m1\_speed > -1\*MOTOR\_CAP){

m1\_speed-=5;

m2\_speed-=5;

m3\_speed-=5;

m4\_speed-=5;

}

}

/\* For front and back \*/

**else** **if**(command == 'w'){

**if**(m5\_speed != m6\_speed){

m5\_speed = 0;

m6\_speed = 0;

}**if**(m5\_speed < MOTOR\_CAP){

m5\_speed += 5;

m6\_speed += 5;

}

}**else** **if**(command == 's'){

**if**(m5\_speed != m6\_speed){

m5\_speed = 0;

m6\_speed = 0;

}**if**(m5\_speed > -1\*MOTOR\_CAP){

m5\_speed -= 5;

m6\_speed -= 5;

}

}**else** **if**(command == 'a'){

**if**(m5\_speed == m6\_speed){

m5\_speed = 0;

m6\_speed = 0;

}**if**(m5\_speed < MOTOR\_CAP){

m5\_speed += 5;

m6\_speed -= 5;

}

}**else** **if**(command == 'd'){

**if**(m5\_speed == m6\_speed){

m5\_speed = 0;

m6\_speed = 0;

}**if**(m6\_speed < MOTOR\_CAP){

m5\_speed -= 5;

m6\_speed += 5;

}

}**else** **if**(command == 'x'){

**MOTOR\_speed**(0,7);

**MOTOR\_speed**(0,8);

m1\_speed = 0;

m2\_speed = 0;

m3\_speed = 0;

m4\_speed = 0;

m5\_speed = 0;

m6\_speed = 0;

}**else** **if**(command == '1'){

m1\_speed = MOTOR\_CAP\*10/100;

m2\_speed = MOTOR\_CAP\*10/100;

m3\_speed = MOTOR\_CAP\*10/100;

m4\_speed = MOTOR\_CAP\*10/100;

m5\_speed = MOTOR\_CAP\*10/100;

m6\_speed = MOTOR\_CAP\*10/100;

}**else** **if**(command == '2'){

m1\_speed = MOTOR\_CAP\*20/100;

m2\_speed = MOTOR\_CAP\*20/100;

m3\_speed = MOTOR\_CAP\*20/100;

m4\_speed = MOTOR\_CAP\*20/100;

m5\_speed = MOTOR\_CAP\*20/100;

m6\_speed = MOTOR\_CAP\*20/100;

}**else** **if**(command == '3'){

m1\_speed = MOTOR\_CAP\*30/100;

m2\_speed = MOTOR\_CAP\*30/100;

m3\_speed = MOTOR\_CAP\*30/100;

m4\_speed = MOTOR\_CAP\*30/100;

m5\_speed = MOTOR\_CAP\*30/100;

m6\_speed = MOTOR\_CAP\*30/100;

}**else** **if**(command == '4'){

m1\_speed = MOTOR\_CAP\*40/100;

m2\_speed = MOTOR\_CAP\*40/100;

m3\_speed = MOTOR\_CAP\*40/100;

m4\_speed = MOTOR\_CAP\*40/100;

m5\_speed = MOTOR\_CAP\*40/100;

m6\_speed = MOTOR\_CAP\*40/100;

}**else** **if**(command == '5'){

m1\_speed = MOTOR\_CAP\*50/100;

m2\_speed = MOTOR\_CAP\*50/100;

m3\_speed = MOTOR\_CAP\*50/500;

m4\_speed = MOTOR\_CAP\*50/100;

m5\_speed = MOTOR\_CAP\*50/100;

m6\_speed = MOTOR\_CAP\*50/100;

}**else** **if**(command == '6'){

m1\_speed = MOTOR\_CAP\*60/100;

m2\_speed = MOTOR\_CAP\*60/100;

m3\_speed = MOTOR\_CAP\*60/100;

m4\_speed = MOTOR\_CAP\*60/100;

m5\_speed = MOTOR\_CAP\*60/100;

m6\_speed = MOTOR\_CAP\*60/100;

}**else** **if**(command == '7'){

m1\_speed = MOTOR\_CAP\*70/100;

m2\_speed = MOTOR\_CAP\*70/100;

m3\_speed = MOTOR\_CAP\*70/100;

m4\_speed = MOTOR\_CAP\*70/100;

m5\_speed = MOTOR\_CAP\*70/100;

m6\_speed = MOTOR\_CAP\*70/100;

}**else** **if**(command == '8'){

m1\_speed = MOTOR\_CAP\*80/100;

m2\_speed = MOTOR\_CAP\*80/100;

m3\_speed = MOTOR\_CAP\*80/100;

m4\_speed = MOTOR\_CAP\*80/100;

m5\_speed = MOTOR\_CAP\*80/100;

m6\_speed = MOTOR\_CAP\*80/100;

}**else** **if**(command == '9'){

m1\_speed = MOTOR\_CAP\*90/100;

m2\_speed = MOTOR\_CAP\*90/100;

m3\_speed = MOTOR\_CAP\*90/100;

m4\_speed = MOTOR\_CAP\*90/100;

m5\_speed = MOTOR\_CAP\*90/100;

m6\_speed = MOTOR\_CAP\*90/100;

}**else** **if**(command == '0'){

m1\_speed = MOTOR\_CAP;

m2\_speed = MOTOR\_CAP;

m3\_speed = MOTOR\_CAP;

m4\_speed = MOTOR\_CAP;

m5\_speed = MOTOR\_CAP;

m6\_speed = MOTOR\_CAP;

}

**MOTOR\_speed**(m1\_speed, 1);

**MOTOR\_speed**(m2\_speed, 2);

**MOTOR\_speed**(m3\_speed, 3);

**MOTOR\_speed**(m4\_speed, 4);

**MOTOR\_speed**(m5\_speed, 5);

**MOTOR\_speed**(m6\_speed, 6);

command = 0;

}

}

}