/\*

Author - Gursimran singh (simar.i3r@gmail.com)

Date - 9/4/10

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#include<avr/io.h>

#define F\_CPU 12000000UL

#include<util/delay.h>

int main()

{

DDRB=0xFF;

DDRD=0x00;

char MS =0;

char NS;

//

//PORTB=0b00001001;

//PORTD|=0b11110000;

while(1)

{

MS = PIND & 0b00001111;

NS = ~MS;

if (NS==0b11110010) //2

{

//MOVE FORWARD

//PORTD|=0b10000000;

PORTB=0b00001001;

}

else if (NS==0b11111000) //8

{

//move back

//PORTD|=0b01000000;

PORTB=0b00000110;

}

else if (NS==0b11110110) //6

{

//PORTD|=0b00100000;

//move right

PORTB=0b00001000;

}

else if (NS==0b11110100) //4

{

//move left

//PORTD|=0b00010000;

PORTB=0b00000001;

}

else if (NS==0b11110101) //5

{

//stop

PORTB=0;

}

else if(NS==0b11110111) //7

{

PORTB=0b00001100;

}

else if(NS==0b11111001) //9

{

PORTB=0b00000011;

}

else if(NS==0b11111010) //0

{

PORTB=0b00001111;

}

}

return 0;

}

Differential drive turn

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Author - Gursimran singh (simar.i3r@gmail.com)

Date - 9/4/10

Make the curve streering of the bot

Date - 15/6/10

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#include<avr/io.h>

#include<avr/interrupt.h>

#define F\_CPU 12000000UL

#include<util/delay.h>

int main()

{

DDRB=0xFF;

DDRD=0x00; //INPUT PORT

pwm\_init();

char MS =0;

char NS;

//

//PORTB=0b00001001;

//PORTD|=0b11110000;

while(1)

{

MS = PIND & 0b00001111;

NS = ~MS;

if (NS==0b11110010) //2

{

//MOVE FORWARD

//PORTB=0b00001001;

PORTB=0x00;

pwm\_set(0,0); //both the bits to max value

}

else if (NS==0b11111000) //8

{

//move back

//PORTB=0b00000110;

PORTB=0xff;

pwm\_set(1023,1023); //both the bits to 0 value

}

else if (NS==0b11110110) //6

{

//move right

//PORTB=0b00001000;

PORTB=0x00;

pwm\_set(0,293);

}

else if (NS==0b11110100) //4

{

//move left

//PORTB=0b00000001;

PORTB=0x00;

pwm\_set(293,0);

}

else if (NS==0b11110101) //5

{

//stop

PORTB=0;

pwm\_set(1023,1023); //set the pwm bits to 0

}

// not to be used in the program..

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else if(NS==0b11110111) //7

{

pwm\_set(293,0);

}

else if(NS==0b11111001) //9

{

pwm\_set(0,293);

}

else if(NS==0b11111010) //0

{

pwm\_set(64,0);

}

\*/

}//while ends

return 0;

}

pwm\_init()

{

TCCR1A |= (1<< COM1A1) | (1<< COM1B1) | (1<< COM1A0) | (1<< COM1B0) | (1<< WGM10)| (1<< WGM11) ;// 10 bit PWM phase correct

TCCR1B |= (1<< CS10); // no prescaling

//TCCR1B |= (1<< CS10) | (1<< CS12) ;

TCNT1 = 0x0000;

}

void pwm\_set( int left\_speed, int right\_speed )

{

OCR1A = left\_speed;

OCR1B = right\_speed;

}