

```
/* ATB_Slt_2_Prg_1.c Created: 14.09.2014 15:04:53 Author: AS */
```

```
// Hardware: Board1, NT2, I/O1, Schalter3
```

```
// Taster1 auf I/O1, Relais auf Schalter 3
```

```
#define F_CPU 16000000L
```

```
// definiere auf 16MHz
```

```
#include <util/delay.h>
```

```
// Einbinden der .h Datei
```

```
#include "i2cmaster.h"
```

```
unsigned char adr1_w = 0x40;
```

```
// Schreibadresse
```

```
unsigned char adr1_r = 0x41;
```

```
// Leseadresse
```

```
unsigned char adr2_w = 0x42;
```

```
// Schreibadresse
```

```
unsigned char adr2_r = 0x43;
```

```
// Leseadresse
```

```
unsigned char d;
```

```
int16_t var;
```

```
// Variable var
```

```
var = 0xff;
```

```
// setze var auf 0xff
```

```
int main(void)
```

```
{
```

```
// Hauptprogramm
```

```
    i2c_init ();
```

```
// i2c initiieren
```

```
    i2c_start(adr1_w);
```

```
// Schreibbefehl für Device 1
```

```
    while(1)
```

```
    {
```

```
// Hauptschleife
```

```
        i2c_write(0xff);
```

```
// Alle Pins des PCF auf 0
```

```
        i2c_start(adr1_r);
```

```
// Starte Lesezugriff
```

```
        d=i2c_readNak();
```

```
// Schreib Leseergebnis in d
```

```
        if (~d & 0x01)
```

```
// Abfrage Taste 1
```

```
            var &=~(1<<0);
```

```
// Wenn T1 gedrückt ist...
```

```
        else
```

```
// Wenn nicht dann ...
```

```
            (var |=1<<0);
```

```
        i2c_start(adr2_w);
```

```
// Schreibbefehl
```

```
        i2c_write(var);
```

```
// Schreibe var
```

```
        _delay_ms(5);
```

```
// 5ms warten
```

```
    }
```

```
    i2c_stop();
```

```
}
```