Slovenská technická univerzita
Fakulta elektrotechniky a informatiky

VNORENÉ SYSTÉMY

Práca s GPIO registrami

Cvičenie 2

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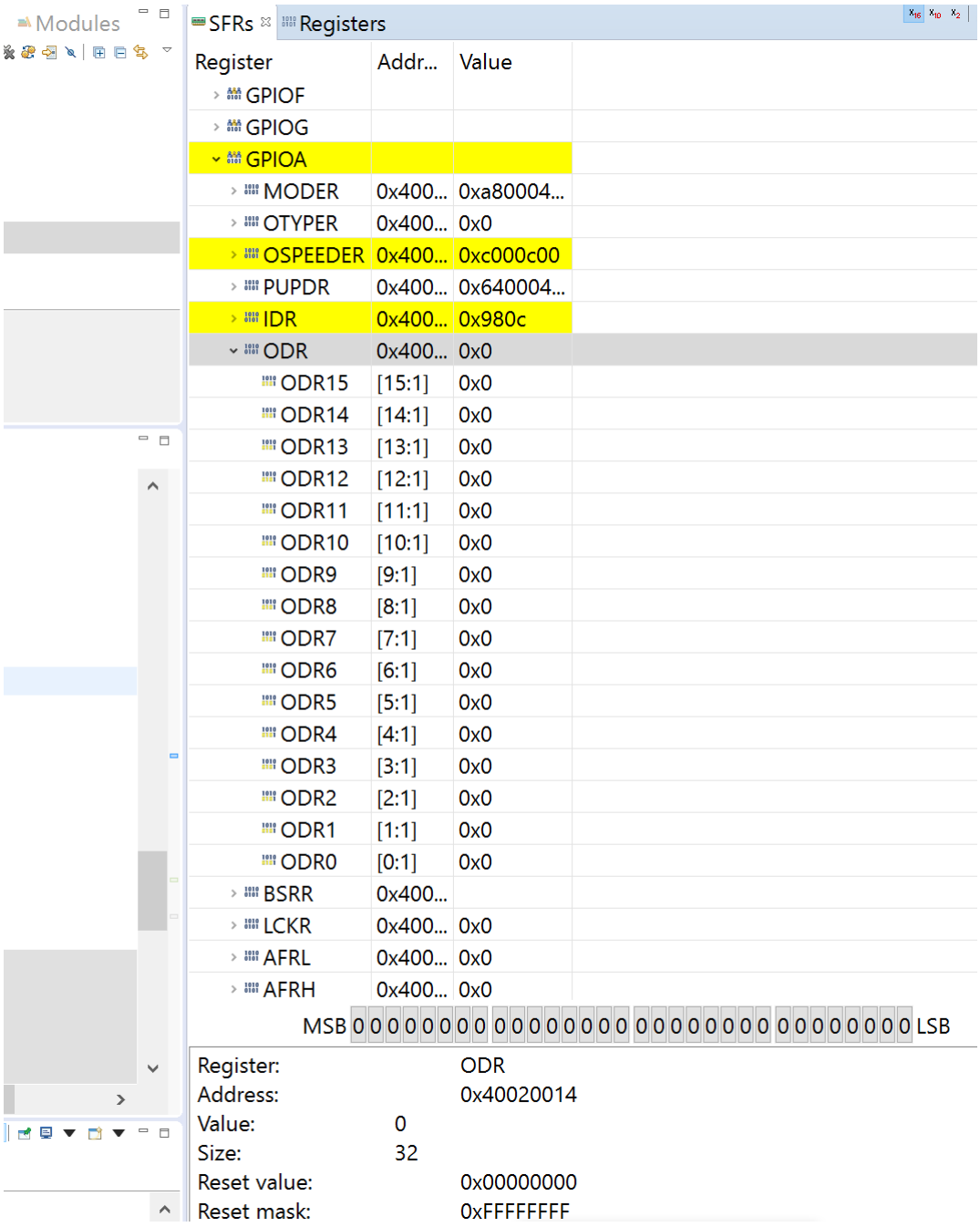
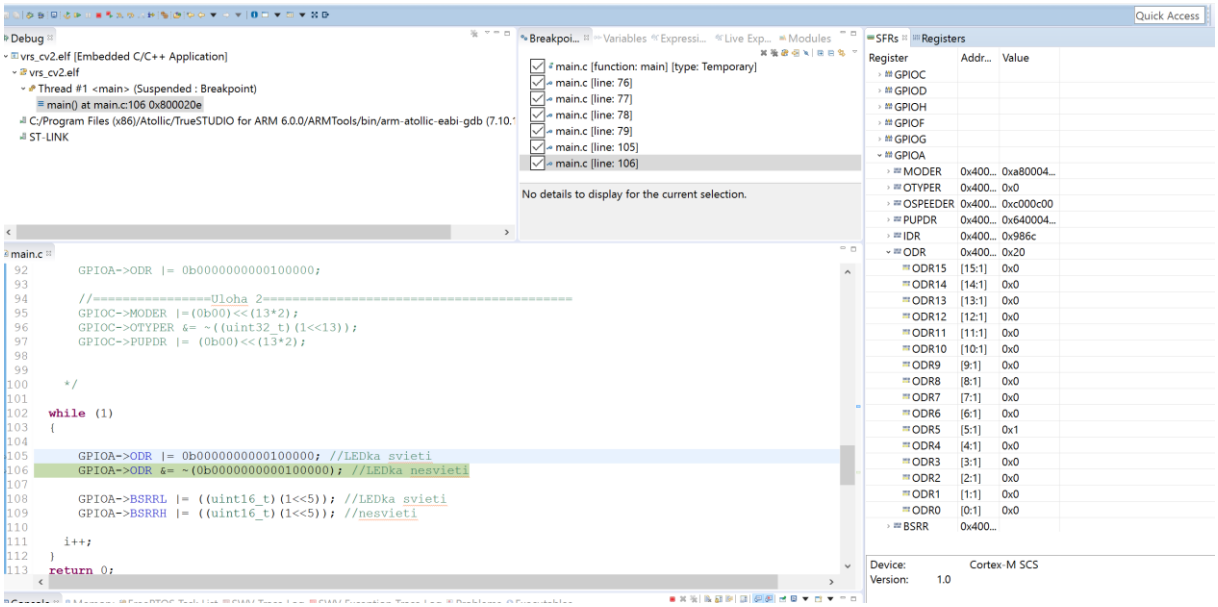
Úloha 1

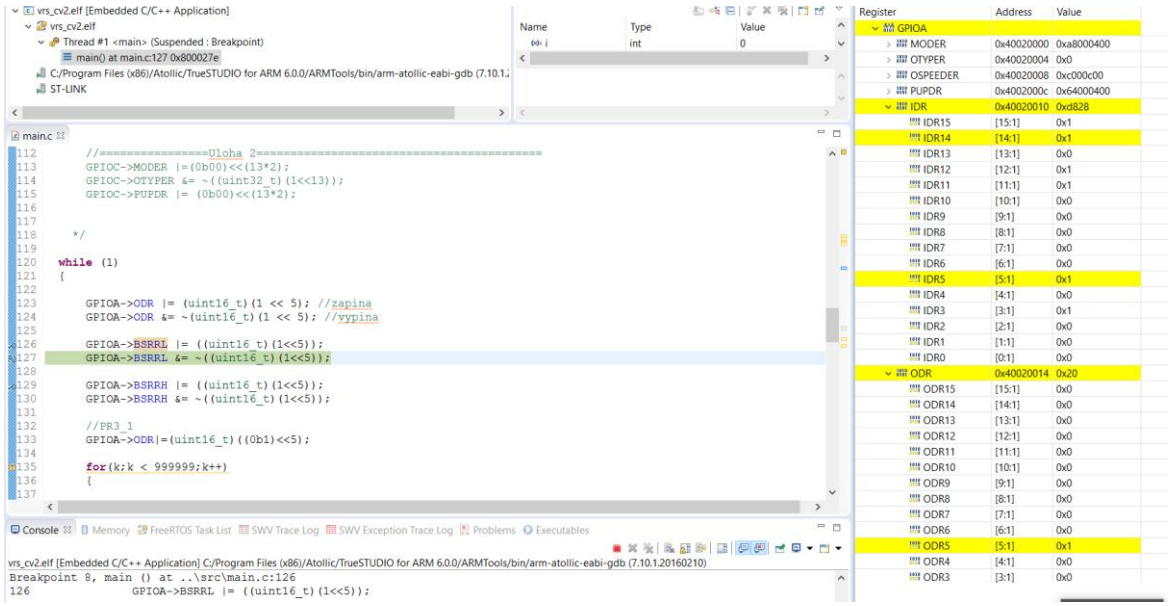
// nastavenie periferie

```
  RCC_AHBPeriphClockCmd(RCC_AHBPeriph_GPIOA, ENABLE);

    GPIOA->MODER |= (uint32_t)((0b01)<<(5*2));
    GPIOA->OTYPER &= ~((0b1)<<5);
    GPIOA->PUPDR |= (uint32_t)((0b01)<<(5*2));
    GPIOA->OSPEEDR |= (uint32_t)((0b11)<<(5*2));
```







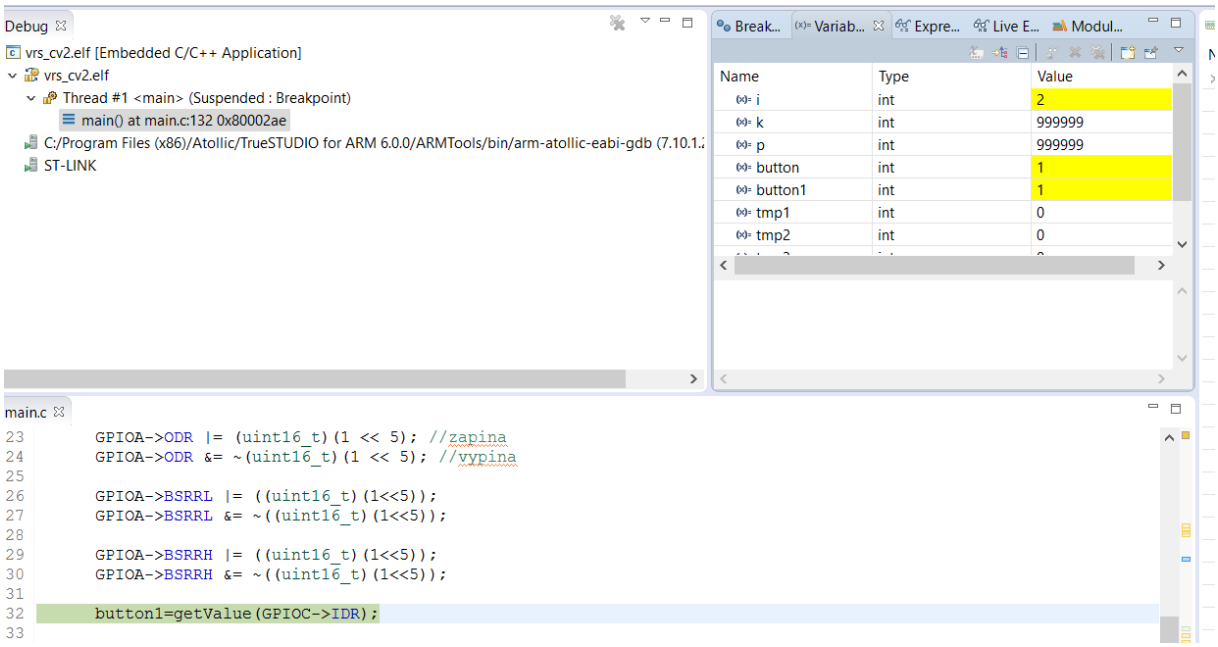
Úloha 2

button1 reprezentuje hodnotu tlacidla.

```
  RCC_AHBPeriphClockCmd(RCC_AHBPeriph_GPIOC,ENABLE);

    GPIOC->MODER &= ~((0b11)<<(13*2));
    GPIOC->OTYPER &= ~((0b1)<<13);
    GPIOC->PUPDR &= ~((0b11)<<(13*2));

button=getValue(GPIOC->IDR);
```



Úloha 3

Blikanie LED v intervale v nekonecnom while cykle.

```
GPIOA->ODR|=(uint16_t)((0b1)<<5);

for(k;k < 999999;k++) {}
GPIOA->ODR&= ~((uint16_t)((0b1)<<5));
for(p;p < 999999 ;p++){}
```

Sledovanie tlacidla a zapinanie/vypinanie LED v nekonecnom while cykle.

```
button=getValue(GPIOC->IDR);
            if(button==1)
                  GPIOA->ODR |=(uint16_t)(0b1<<5);
            else
      GPIOA->ODR &=~((uint16_t)(0b1<<5));
```

Po stlaceni tlacidla LED zmeni stav.

```
button1=getValue(GPIOC->IDR);
if (button1 == 1)
{
      while(counter < 6)
      {
            counter++; //5 "impulzov"
      }
      counter = 0;
}
button1=getValue(GPIOC->IDR);
```

```
if (button1 == 0)
      {
            while(counter < 6)
            {
                  counter++; //5 "impulzov"
            }
            counter = 0;
      }
button1=getValue(GPIOC->IDR);
if (button1 == 1)
      {
            while(counter < 6)
            {
                  counter++; //5 "impulzov"

            }
            counter = 0;
            if(tmp1 == 0)
            {
                  GPIOA->ODR |=(uint16_t)(0b1<<5);
                  tmp1 = 1;
            }
            else if(tmp1 == 1)
            {
                  GPIOA->ODR &= ~(uint16_t)(0b1<<5);
                  tmp1 = 0;
            }
      }
```