

# Organizacija računalnikov

## Laboratorijske vaje

R.Rozman 2018

# Vsebina vaj

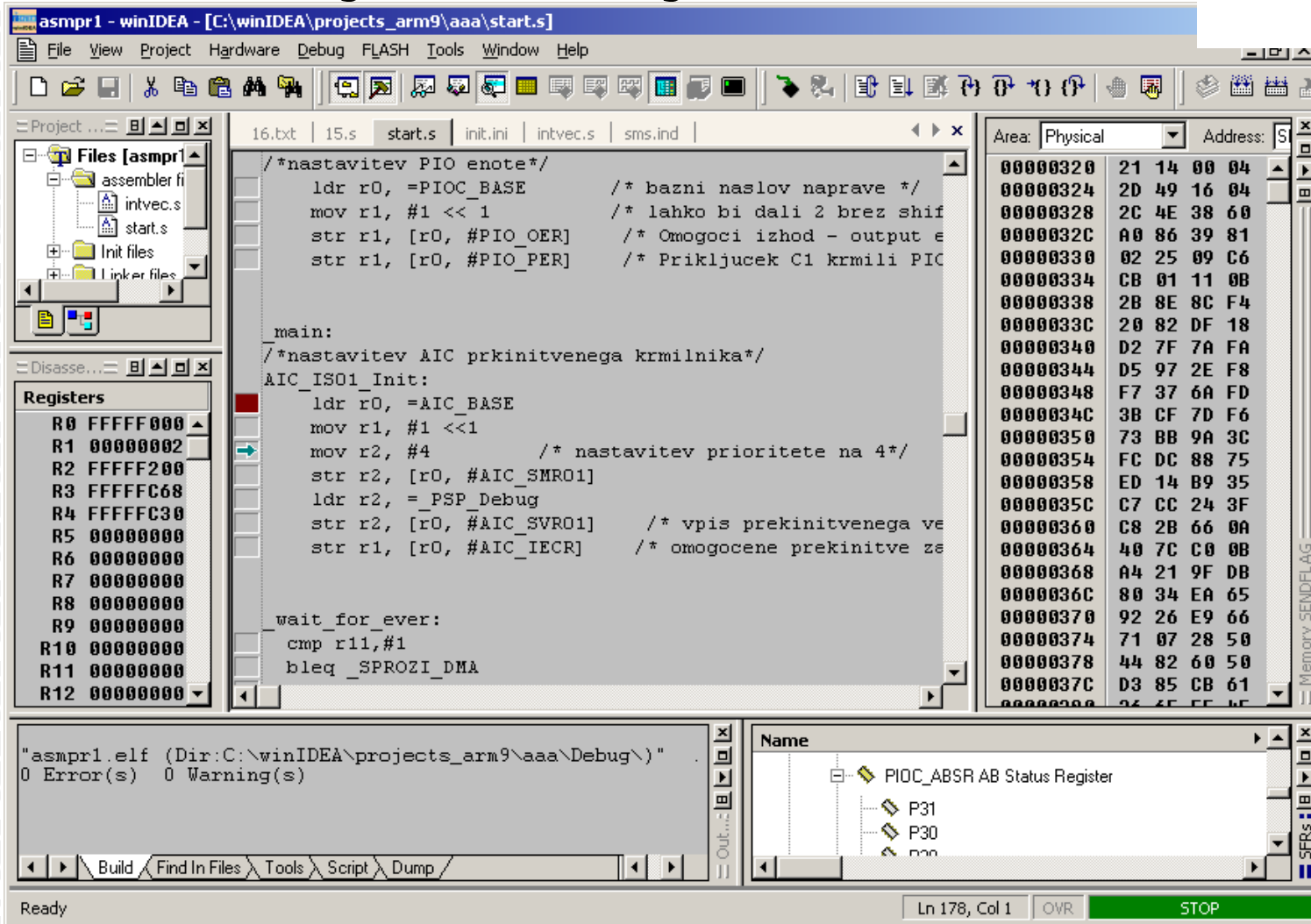
- **Programiranje v zbirnem jeziku ARM**
  - ponovitev, razširitev, nadgradnja
  - Prvo preverjanje (predvidoma 19.11-23.11.2018)
- **Vhodno izhodne naprave, FRI-SMS**
  - Paralelni vhod/izhod (PIO)
  - Časovniki (TC)
  - Zaporedni vmesnik (UART, DBGU)
  - Prekinitve, prekinitveni krmilnik (AIC) \*
  - Zaključno preverjanje – zadnji teden semestra

priključitev osnovnih V/I enot, osnove jezika C
- **2 obvezni in 2 neobvezni domači nalogi**
  - MiMo, osnovna ARM-Aplikacija, npr. oddajnik Morsejeve abecede
  - MiMo dodatki, ARM razširitve (aplikacija, senzorji)
- **Seminar po dogovoru z asistentom**

# Ocenjevanje

- Vaje prispevajo **50%** h končni oceni in morajo biti opravljene:
  - **uspešno oddane domače naloge** (obvezni del),
  - preverjanja morajo biti **vsaj 50% oz. 100 točk** :
    - dve preverjanji (90 + 110)
      - možnih 200 točk
      - vsaj 100 točk na obeh skupaj
  - dodatno delo (neobvezne domače naloge, projekt, MiMo,...) se prišteje točkam iz preverjanj

# Razvojno okolje WinIDEA



The screenshot displays the WinIDEA development environment with the following components:

- Project Explorer:** Shows the project structure including 'asmpr1', 'Files [asmpr1]', 'assembler fi', 'intvec.s', 'start.s', 'Init files', and 'Linker files'.
- Registers:** Lists registers R0 through R12 with their current values, such as R0 at 0xFFFF000 and R1 at 0x0000002.
- Code Editor:** Contains assembly code for PIO and AIC initialization, including comments in Slovenian. The code includes instructions like `ldr r0, =PIOC_BASE` and `ldr r0, =AIC_BASE`.
- Memory Dump:** Shows a physical memory dump with addresses ranging from 00000320 to 0000037C and their corresponding hex values.
- Hardware Monitor:** Displays the hardware configuration, including the 'PIOC\_ABSR AB Status Register' and other registers like P31 and P30.
- Output Window:** Shows the build output: `"asmpr1.elf (Dir:C:\winIDEA\projects_arm9\aaa\Debug\)"` with 0 errors and 0 warnings.
- Status Bar:** Indicates the current position at 'Ln 178, Col 1' and shows a 'STOP' button.



# V drugem delu – FRI SMS



# AT91SAM9260

