Otto-von-Guericke Universität Magdeburg

Arbeitsgruppe für Eingebettete Systeme und Betriebssysteme
Prof. Dr. Jörg Kaiser

Theoretisches Aufgabenblatt 9

Abgabetermin: 19.01.-21.01.2012

1. The lecture presented the CPU MC6809. The Condition Code Register *CCR* of this CPU contains which flags? What is the influence of these flags on the processors behaviour? State operations or operation classes that are influence by each flags.

2. Which of the above mentioned flags are set after the addition `ADDA mem`. The accumulator `A` contains the value $D7_{hex}$ while the memory address `mem` contains 87_{hex}.

3. Compare the operation classes `JMP` and `BRA`? State benefits and drawbacks of each class! Which class is redundant and why?

4. Describe the memory formats *Little Endian* and *Big Endian*. What are they used for and what is their difference! Present the value $115599CCh$ in graphical form in both formats!

5. Describe two addressing modes of the MC6809. Write a small assembler program using it to move the value of memory address 1002 to the register A. State a usage for the described modes in general purpose programs.