# DTEK laboration 2 Nios2time

Q1.1

subi is implemented as:

addi rB, rA, -IMMED.

subi is a pseudo-instruction to addi.

Q1.2

movi är implementerad som:

addi rB, r0, IMMED.

D.v.s att movi är en pseudo-instruktion till addi.

Q1.3

movi r16, 4711 🡪 addi r16, r0, 4711

Q1.4

PC is incremented by 4 every time after execution.

Q1.5

PC in incremented by 4 if rA == rB, otherwise the PC is incremented by 4 + IMM16.

Q1.6

PC is incremented by 4 + IMM16

Q2.1

Change movi r16, 0x41 to movi r16, 0x47

Q2.2

The ori instruction changes r16 from 0x42 to 0x62 at the first iteration.

Q2.3

It will change the output because r16 that is 0x41 at start changes to 0x22 after the first iteration. After that it will never go beyond 3F.

Q2.4

Similar to logic-gates, compare register to immediate-value on every position at binary-level. Only difference is between AND and OR.

Q2.5

Because bne-condition is fulfilled at that point. (r16 == r8)