A white sheet with black and red text

Description automatically generatedA white sheet with black text

Description automatically generated

* There are some instructions for doing Arithmetic and logic operations; such as:

ADD, SUB, MUL, AND, etc.

* Write a program that calculates 19 + 95

**LDI R16, 19 ;R16 = 19**

**LDI R20, 95 ;R20 = 95**

**ADD R16, R20 ;R16 = R16 + R20**

* Write a program that calculates 19 + 95 + 5

**LDI R16, 19 ;R16 = 19**

**LDI R20, 95 ;R20 = 95**

**LDI R21, 5 ;R21 = 5**

**ADD R16, R20 ;R16 = R16 + R20**

**ADD R16, R21 ;R16 = R16 + R21**

**LDI R16, 19 ;R16 = 19**

**LDI R20, 95 ;R20 = 95**

**ADD R16, R20 ;R16 = R16 + R20**

**LDI R20, 5 ;R20 = 5**

**ADD R16, R20 ;R16 = R16 + R20**

* Only registers in the range R16 to R31 can be loaded immediate.
* LDI - We cannot load a constant into the registers R0 to R15 directly. It would have to be loaded into a valid register first then copied. To load the value of 10 into register zero (R0):

🡪

LDI R16,10       ; Set R16 to value of 10   
MOV R0, R16    ; Copy contents of R16 to R0

A yellow background with black text

Description automatically generatedA yellow background with black text

Description automatically generatedA yellow background with black text

Description automatically generated

A green background with black text

Description automatically generatedA screenshot of a computer screen

Description automatically generated

A yellow background with black text

Description automatically generated

A yellow and black text

Description automatically generatedA yellow background with black text

Description automatically generatedA yellow background with black text

Description automatically generatedA green background with black text

Description automatically generatedA yellow background with black text

Description automatically generatedA yellow paper with black text and numbers

Description automatically generatedA yellow paper with black text

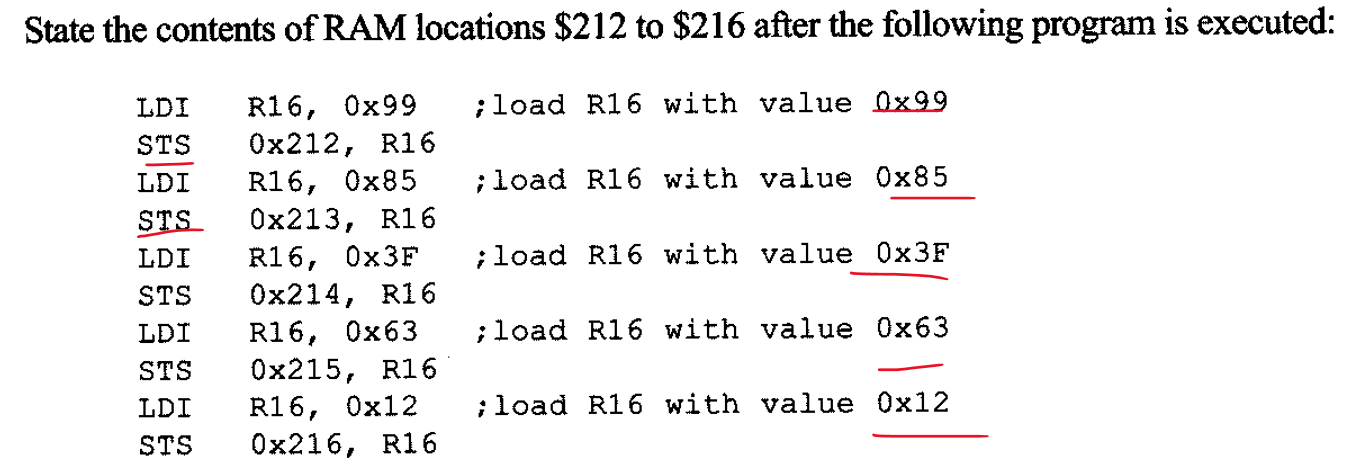
Description automatically generatedA yellow paper with black text

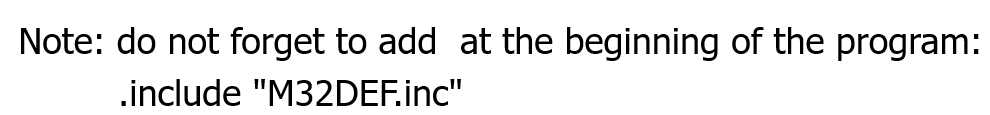
Description automatically generatedA yellow paper with black text

Description automatically generatedA yellow paper with black text

Description automatically generatedA screenshot of a calculator

Description automatically generatedA black text on a white background

Description automatically generated

A black and white document with text

Description automatically generatedA white screen with black text

Description automatically generated

A screenshot of a computer code

Description automatically generated