a) Qual é a operação realizada pelo código acima?

Este código inicializa a0 com 1 e a1 com 2. Em seguida, inicia um loop que dobra repetidamente o valor em a1 e incrementa a0 até que a0 seja igual a 5. O valor de a1 após o loop será 32 (2 vezes 5 vezes).

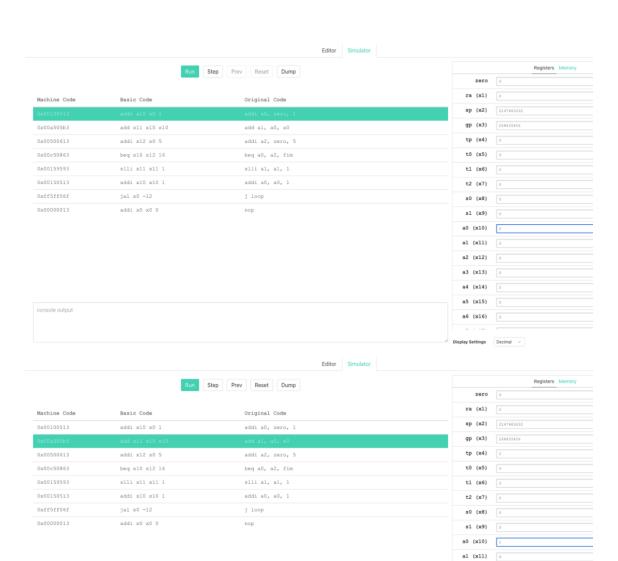
b) Qual é o conteúdo (em decimal) dos registradores a0, a1 e a2 ao final da execução do programa?

a0: 5a1: 32a2: 5

c) Quais são os valores de loop (na instrução j loop) e fim (na instrução beq a0, a2, fim)

loop: -12 **fim**: 16

d) Adicione "prints" da tela do simulador ao arquivo PDF. Esses "prints" deverão mostrar todo o ambiente, incluindo o código em Assembly que foi executado e os valores exibidos na interface após a execução de cada instrução (código de máquina armazenado na memória, valores do pc e dos demais registradores envolvidos).

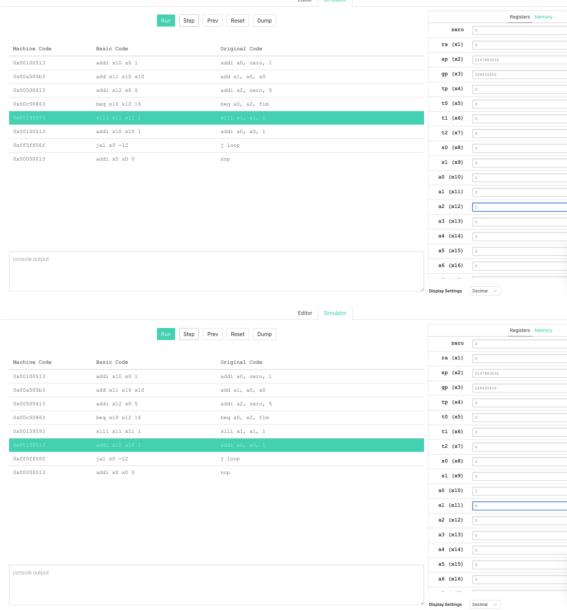


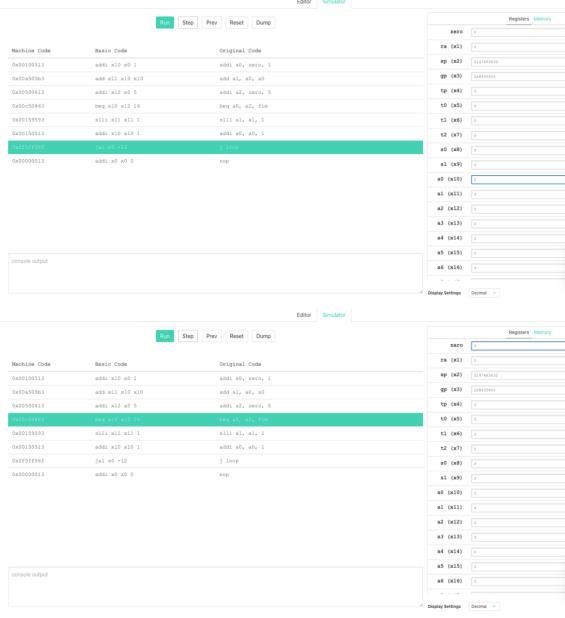
Display Settings Decimal V

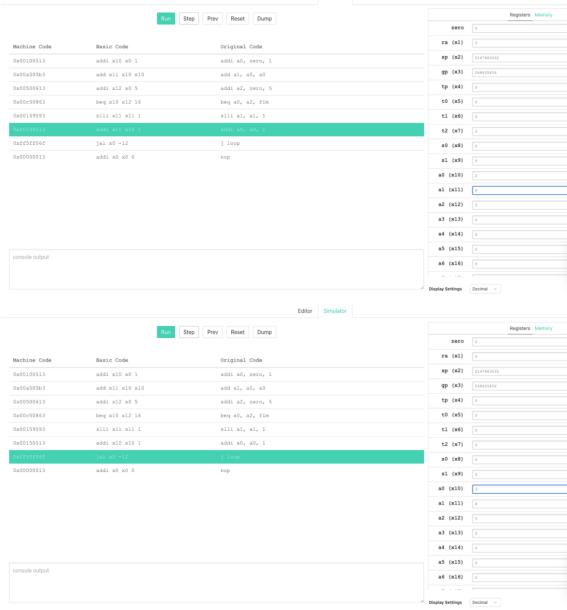
a6 (x16)

Editor Simulator Run Step Prev Reset Dump zero 0 ra (x1) 0 Basic Code Original Code **sp (x2)** 2147483632 0x00100513 addi x10 x0 1 addi a0, zero, 1 gp (x3) 268435456 0x00a505b3 add x11 x10 x10 add a1, a0, a0 tp (x4) t0 (x5) 0x00c50863 beq x10 x12 16 beq a0, a2, fim 0x00159593 slli x11 x11 1 slli al, al, 1 t1 (x6) 0x00150513 addi x10 x10 1 addi a0, a0, 1 t2 (x7) jal x0 -12 0xff5ff06f j loop s0 (x8) 0x00000013 addi x0 x0 0 s1 (x9) a0 (x10) al (x11) a4 (x14) a5 (x15) a6 (x16) 0 Display Settings Decimal V

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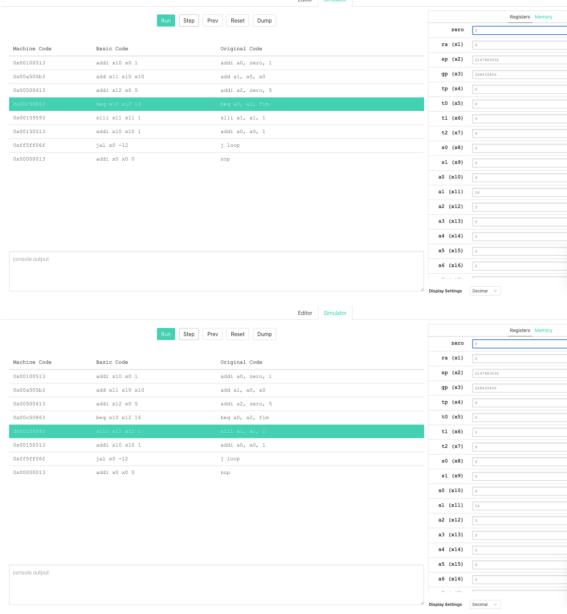


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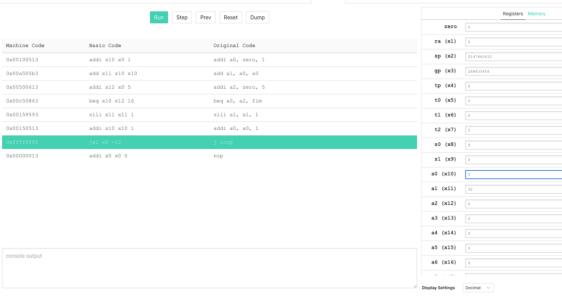
a5 (x15) 0 a6 (x16) Display Settings Decimal V Editor Simulator Run Step Prev Reset Dump zero 0 ra (x1) 0 Machine Code Basic Code Original Code **sp (x2)** 2147483632 0x00100513 addi x10 x0 1 addi a0, zero, 1 gp (x3) 268435456 0x00a505b3 add x11 x10 x10 add a1, a0, a0 tp (x4) 0x00500613 addi x12 x0 5 addi a2, zero, 5 0x00c50863 beq x10 x12 16 beq a0, a2, fim t0 (x5) t1 (x6) 0x00150513 addi x10 x10 1 addi a0, a0, 1 0xff5ff06f jal x0 -12 j loop 0x00000013 addi x0 x0 0 a0 (x10) al (x11) a2 (x12) a3 (x13) a4 (x14) a5 (x15) 0 a6 (x16) o Display Settings Decimal V

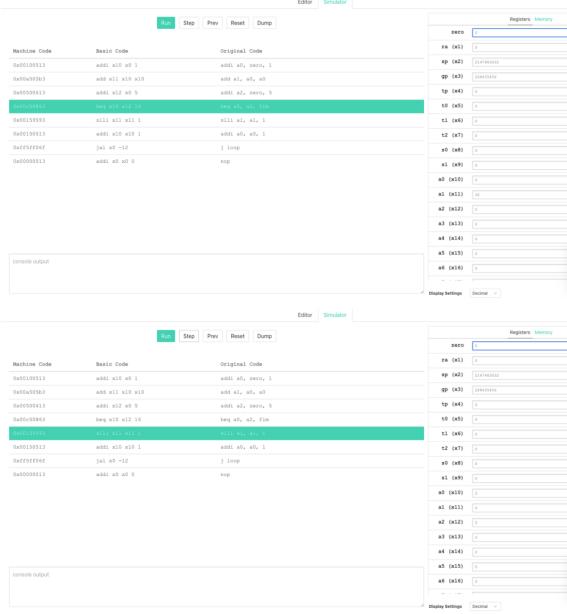
Editor Simulator Run Step Prev Reset Dump zero 0 ra (x1) 0 Machine Code Basic Code Original Code **sp (x2)** 2147483632 0x00100513 addi x10 x0 1 addi a0, zero, 1 gp (x3) 268435456 add x11 x10 x10 0x00a505b3 add a1, a0, a0 tp (x4) 0x00500613 addi x12 x0 5 addi a2, zero, 5 beq x10 x12 16 t0 (x5) beq a0, a2, fim 0x00c50863 0x00159593 slli al, al, 1 t1 (x6) t2 (x7) 0xff5ff06f jal x0 -12 j loop s0 (x8) addi x0 x0 0 nop s1 (x9) a0 (x10) al (x11) 16 a2 (x12) a4 (x14) a5 (x15) a6 (x16) 0 Display Settings Decimal V Editor Simulator Run Step Prev Reset Dump

zero 0 ra (x1) 0 Original Code Machine Code Basic Code **sp (x2)** 2147483632 addi x10 x0 1 0x00100513 addi a0, zero, 1 gp (x3) 268435456 0x00a505b3 add x11 x10 x10 add a1, a0, a0 tp (x4) 0x00500613 addi x12 x0 5 addi a2, zero, 5 t0 (x5) 0x00c50863 beq x10 x12 16 beq a0, a2, fim 0x00159593 slli x11 x11 1 slli al, al, 1 t1 (x6) 0x00150513 addi x10 x10 1 addi a0, a0, 1 0x00000013 addi x0 x0 0 nop a0 (x10) al (x11) a2 (x12) a3 (x13) a4 (x14) a5 (x15) 0 a6 (x16) o Display Settings Decimal V



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