C prog for max number in array

|  |
| --- |
| // C program to find maximum in arr[] of size n  #include <stdio.h>    // Function to find maximum in arr[] of size n  **int** largest(**int** arr[], **int** n)  {  **int** i;        // Initialize maximum element  **int** max = arr[0];        // Traverse array elements from second and      // compare every element with current max  **for** (i = 1; i < n; i++)  **if** (arr[i] > max)              max = arr[i];    **return** max;  } |

Assembly raw code: RISC V

largest:

addi sp,sp,-48

sw s0,44(sp)

addi s0,sp,48

sw a0,-36(s0)

sw a1,-40(s0)

lw a5,-36(s0)

lw a5,0(a5)

sw a5,-24(s0)

li a5,1

sw a5,-20(s0)

j .L2

.L4:

lw a5,-20(s0)

slli a5,a5,2

lw a4,-36(s0)

add a5,a4,a5

lw a5,0(a5)

lw a4,-24(s0)

bge a4,a5,.L3

lw a5,-20(s0)

slli a5,a5,2

lw a4,-36(s0)

add a5,a4,a5

lw a5,0(a5)

sw a5,-24(s0)

.L3:

lw a5,-20(s0)

addi a5,a5,1

sw a5,-20(s0)

.L2:

lw a4,-20(s0)

lw a5,-40(s0)

blt a4,a5,.L4

lw a5,-24(s0)

mv a0,a5

lw s0,44(sp)

addi sp,sp,48

jr ra