

note @364

173 views

[Exams] Past Exams 2016 and older Q&A

Discuss all questions pertaining to exams which took place in 2016 and older here.

You can find the past exams here: <https://cs61c.org/resources/exams>

When posting questions, you **MUST** reference the semester, exam, **AND** question so we can help you.

Please put this at the beginning of your post in this format: **[{Year} {Semester}-{Exam}]:Q{Question Number}**

For example: **[2016 SP-MT1]:Q1**, or **[2014 SU-F]:Q3**

{Semester} is one of these: SP, SU, FA

{Exam} is one of these: Q, MT, MT1, MT2, F

If you follow this format, it will make it very easy to search for similar questions!

midterm_exam1

midterm_exam2

final_exam

~ An instructor (Jie Qiu) thinks this is a good note ~

Updated 1 month ago by Stephan Kaminsky

followup discussions *for lingering questions and comments*

Resolved Unresolved



[REDACTED] 4 months ago

[2015 FA-MT1]:Q2.1

Why is the order for the last three values `c`, `&temp`, and `&b`?

Consider the following C program:

```
int a = 5;
void foo(){
    int temp;
}
int main()
{
    int b = 0;
    char* s1 = "cs61c";
    char s2[] = "cs61c";
    char* c = malloc(sizeof(char) * 100);
    foo();
    return 0;
};
```

1) Sort the following values from least to greatest: `&b`, `c`, `b`, `&temp`, `&a`.

`b < &a < c < &temp < &b`

helpful! | 0



Jie Qiu 4 months ago c is a heap address. &temp and &b are stack addresses. b is initialized before temp on the stack therefore has a larger address.

helpful! | 0



Anonymous Beaker 4 months ago Isn't b the same as &b?

helpful! | 0



Jie Qiu 4 months ago b is 0 while &b is a stack address

helpful! | 1

Resolved Unresolved



[REDACTED] 1 month ago

[2015 SP-F]:M1-3

In the RISC-V solutions of this question, they used `addiu` instead of `addi` in order to increment the stack pointer, but I remember for everything else we have done in this class, we have always used `addi` and never `addiu`. I was wondering why that is the case that `addiu` is typically never used for us, and perhaps why it was used in this question.

As well, when I searched on stack overflow about `addi` vs `addiu`, there was a [response](#) that said `addi` should never be used in practise, and it should always be `addu` or `addiu`. Can someone please explain what is going on here and why?

```

non-zero:  addiu  SP, SP, -8
           SW    SO, 0(SP)
           SW    ra, 4(SP)
           addi  SO, a0, 0
           addi  ra, a0, 0
    
```

} Backup saved register & return addr,
as we are making a function call
#back up arr

helpful! | 0



Daniel Fan 1 month ago I think `addiu` is MIPS while `addi` is RISC-V. So just use `addi` for everything in this semester.

helpful! | 0