

# Exercise Session — Computer Science — 13

Riddle, Muddiest Point(s), Q&A

# Overview

## Today's Plan

Kahoot

Old Exams


Riddle

Muddiest Points

Simplify `if`-clauses



`n.ethz.ch/~iopopa`

 [Link to Webpage](#)

 [Send an e-Mail](#)

# 1. Feedback regarding **code** expert

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Any questions regarding **code expert** on your part?

## 2. Kahoot

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It's time for a BIG Kahoot!

**Are you ready for it?**

## 3. Old Exams

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# Practicing with old exams



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- They can be a good way to practice for the real thing
- Make sure to select the correct ones (the one for your course)
- The password is always: **Informatik**



`lec.inf.ethz.ch/past_exams`

# Create your own cheat sheet

- ... but find inspiration on VMP and AMIV websites
- 4 pages of cheat-sheet (double-sided) - handwritten or typed
- You can also look at the cheat sheets from the Informatik courses taken by Maths, Physics and Mechanical Engineering students (in the 1st semester) and by Electrical Engineering students (in the 2nd semester) - the course contents are very similar
- The PVK scripts are also nice summaries of the lecture contents!

# Organize your exam session

- ... by creating a fairly detailed study plan

ETH Lernplan: Prüfungsphase (WS)

		JANUAR										FEBRUAR																									
		Prüfungssession										1. Woche FS																									
		W4					W5					W6					W7					W8															
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ETH Beratung

## 4. Riddle

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# Riddle

Riddle me this code example on [code expert](#) ...

## 5. Muddiest Points

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**So, what are you stuck on?**

## 6. Simplify `if`-clauses

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# Simpler ifs I

We noticed that many students write code similar to this

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```
if (grid != nullptr) {
    if (grid->is_filled(row, col)) {
        if (col == 8) {
            if (fillValidNumber(grid, row + 1, 0)) {
                return true;
            }
        } else {
            if(fillValidNumber(grid, row, col + 1)) {
                return true;
            }
        }
        return false;
    }
}
```

## Simpler ifs II

Since the function `fillValidNumber` returns a boolean and we also want to return a boolean, we can remove the most nested `if` statements and the last return statement

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```
if (grid != nullptr) {
    if (grid->is_filled(row, col)) {
        if (col == 8) {
            return fillValidNumber(grid, row + 1, 0);
        } else {
            return fillValidNumber(grid, row, col + 1);
        }
    }
}
```

## Simpler ifs III

We can also use the fact that `&&` is short-circuiting to merge the two outer `if` statements

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```
if (grid != nullptr && grid->is_filled(row, col)) {  
    if (col == 8) {  
        return fillValidNumber(grid, row + 1, 0);  
    } else {  
        return fillValidNumber(grid, row, col + 1);  
    }  
}
```



# Questions?

## 7. Outro

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# General Questions?

See you next time

Have a nice week!