

Topics Covered

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CS50 Study

This will be a huge help for you before and during your test!

Almost Exhaustive List of Topics

Below is an attempt at an exhaustive list of topics that can be covered in the midterm.

Week 0

- Scratch

Week 1

- Variables and data types
- Conditions
- Boolean expressions
- Loops
- Compiling
- Overflow
- Floating-point imprecision

Week 2

- Debugging
- Command-line arguments
- Arrays
- Functions
- Scope

Week 3

- Asymptotic notation
- Linear search
- Binary search
- Bubble sort
- Selection sort
- Insertion sort
- Merge sort
- Recursion

Week 4

- Redirection and pipes
- File I/O
- Memory management

- Heap
- Stack
- Pointers
- Structures

Week 5

- Linked lists
- Hash tables
- Tries
- Stacks
- Queues
- Huffman coding

Tips to help with solving problems

You will have access to study.cs50.net, section notes, lecture notes, and past quizzes/solutions so you should definitely take advantage of this and use them!

1. Pseudocode

If you can write out a pseudocode example of your solution, chances are you will get the question correct, and, at the very least, you will get partial credit for understanding the logic behind it.

2. Pay attention to key words

Usually in the quiz questions, they will include guiding key words, such as 'dynamically allocated memory' (which alludes to using `malloc`), or 'if A is not B, then C' (which alludes to using an if statement to check that $A \neq B$).

Remember, the question gives you a lot of clues on how to implement your solution. Pay close attention to these details as they can help you think of the correct answer!

More Practice Questions!

The problems shown below are from previous practice exams and can be found on the cs50 website. These specific problems were chosen because the best reflect the types of questions that will appear on this year's exam. The exam itself will consist of 10 longer-form questions of the types shown below. I highly recommend going through these questions! Solutions are also posted on the CS50 website. Good luck!

2015 Quiz 0

8, 17, 18, 23

2014 Quiz 1

4

2014 Quiz 0

27

2013 Quiz 1

0, 1, 2, 12, 14 (not the actual question, but the idea), 17, 20, 22

2013 Quiz 0
8, 21, 22