Revision

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Section 1

Test 1

Test 1 - Format

- Date: Thursday 11th January 2024.
- Time: 10am to 12pm UK time. 2pm to 4pm Dubai.
- Duration: 2hours.
- Location: Take-home test. You can complete this assignment at home (on your own!). We will make the labs available for students who require devices.
- Format: Open book test with 2-4 short programming questions. You will be asked to write programs solving various problems related to the content that has been covered during the course.

Section 2

Example exercises

Working through exercises

- I want to work through some typical example questions.
- These examples come from leetcode.com, and are all easy rated examples.
- Please focus more on the process that we take to solve these, rather than the actual example questions as the question given it the test will be rather different.

Two Sum

- Given an array of integers *nums* and an integer *target*, return indices of the two numbers such that they add up to *target*.
- You may assume that each input would have exactly one solution, and you may not use the same element twice.
- You can return the answer in any order.
- **Example:** Input: nums = [2,7,11,15], target = 9. Output: [0,1]
- **Example:** Input: nums = [3,2,4], target = 6, Output: [1,2]

Roman numerals to Integer

- Roman numerals are represented by seven different symbols: I (1), V (5), X (10), L (50), C (100), D (500) and M (1000).
- If you want to increase a number you add more of that symbol until you get to the next symbol.
- For example 2 == II, 3 == III and then 5 == V
- There is a special case for 4,9, 40, 90, 400 and 900: In this case we subtract one smaller symbol from the next larger one by placing it in front of the larger symbol.
- For example: 4 = IV and 90 = XC.
- **Example:** Input: s = "LVIII", Output: 58.
- **Example:** Input: s = "MCMXCIV", Output: 1994.

Lecture summary

- Test 1 Format
- Example exercises

Thank you! Questions?