Wednesday: White Board Interview Practice

Start Assignment

Due No due date   **Points** 12   **Submitting** a text entry box

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Take time this morning and split into groups of 5. You will be practicing for white board interviews that will be touched on more during your project period. Pick one of you to take the mock white board interview, set a toy problem for them to go through, and at the end use the rubric below to grade and give feedback.

White boarding interview practice

Criteria	Ratings				Pts
Problem solving Problem solving	**3 Pts** **Full marks** The student clarifies the scope as a natural first step by asking questions and stating their assumptions. They are able to outline a solution beyond the most naïve, and implement it, covering the vast majority of cases. If hints are required, the candidate understands their importance quickly, and moves on.	**2 Pts** **Half marks** The student dives in to a solution without giving the problem much thought, or asking questions. They concieve of and implement a naïve solution, but can think of a better approach with minimal hints, and are able to complete it with assistance.	**1 Pts** **Low rating** The student is unable to arrive at a solution beyond the most basic, naïve approach, even with significant help and hints.	**0 Pts** **No marks**	3 pts
Quality Code fluency	**3 Pts** **Full marks** The student codes fluently and naturally.Thought is translated into code without any apparent difficulty. They may use placeholders to abstract away functionality then come back to fill them in. When reading code, the student is able to understand the full behavior of the code quickly.	**2 Pts** **Half marks** The student is able to write basic code, but does not demonstrate strong familiarity with their chosen language's characteristics and constructs. When reading code, they are able to understand the general purpose of the code.	**1 Pts** **Low rating** The student is unable to translate their thoughts into code. Little knowledge of basic language constructs is demonstrated. The student chooses nonsensical or non-descriptive variable names when writing code. They are unable to describe the behaviour of any provided code with any precision.	**0 Pts** **No marks**	3 pts

Criteria	Ratings				Pts
Quality System design	**3 Pts** **Full marks** The student is able to break down a complex system into elegantly structured components, and thoroughly describe the interaction model, the interface and the behaviour. For simple code, functions are used appropriately to minimise complexity.The code keeps open the possibility of future needs without significant refactoring.	**2 Pts** **Half marks** The student adopts a reactive approach to code or system organisation, thinking only one step ahead at a time. Their finished output has the appearance of being bolted together, rather than being coherently designed. Abstractions exist, but are leaky, rigid or resistant to change.	**1 Pts** **Low rating** The student does not seek to break out their code into reusable components, and doesn't understand the value of doing so. The candidate is unable to describe the interaction of system components with any precision. The candidate does not demonstrate any understanding of separation of concerns.	**0 Pts** **No marks**	3 pts

Criteria	Ratings				Pts
Quality Computer science knowledge	**3 Pts** **Full marks** The student is able to pick an appropriate data structure or algorithm for a task, and has a strong understanding of their relative merits. The student's knowledge goes beyond the basics, and there is a demonstrated familiarity with concepts like heaps, priority queues, tries, or more exotic constructs.	**2 Pts** **Half marks** The student understands and can describe the characteristics of common algorithms. The student is aware that certain data structures are better for certain tasks, but has difficulty articulating why.	**1 Pts** **Low rating** The student has heard of common data structures, but cannot describe which ones are appropriate for the task at hand, or when they might be useful. For example, the student cannot explain the difference between the behavior of an O(n) solution and an O(n²) solution, even if they are able to define them.	**0 Pts** **No marks**	3 pts

Total points: 12