SDE 1-3 Coding round expectation matrix

	SDE-1	SDE-2	SDE-3
Requirement gathering/analysis	Candidate understands all the aspects of the problem statement and can connect them well.	Candidate derives part of the requirements by questioning/explicitly assuming, with help of the interviewer.	Given an abstract problem statement, candidate drives requirement analysis through discussion
Problem Solving(Design/Algorithm)	Interviewer may give clues on high level components or interfaces needed	- Candidate comes up with high level components/interfaces. - Chooses right data structures, algorithms keeping computation/memory complexity in mind. Interviewer may nudge them in the right direction for both of these.	- Candidate comes up with correct high level components/interfaces and correct data structures on his/her own with minimal interference from the interviewer. - Clarity in thought process and communication.
Code structure (Modularity/Extensibility)	- Segregating functionality into multiple modules/classes - function/method signatures	Separation of concerns correctly addressed, with minimal guidance from interviewer.	Separation of concerns clearly and correctly addressed
Actual Coding	- readable - few use-cases up and running - identifies corner cases but may not address	- readable - adheres to the design without many changes - most of the use-cases up and running - Able to debug and fix issues quickly - identifies and addresses corner cases	- readable - adheres to the design without many changes - most of the use-cases up and running - Able to debug and fix issues quickly - Can progress to more usecases/extensions - identifies and addresses corner cases

Post coding discussion		- Identifies gaps/limitations in their solutions	- Identifies gaps/limitations in their solutions - Can think of better ways immediately

In memory search engine problem

Primary problem statement

1. It should be possible to create a `dataset` in the search engine.
2. It should be possible to insert documents into a given dataset. Each document is simply a piece of text.
3. It should be possible to search through documents for a search term in a given dataset. A search pattern could have one or more words. When there are more words, all the words in the search pattern should be present in the document to match, irrespective of their order.

	SDE-1	SDE-2	SDE-3
Requirement gathering/analysis	Given a detailed problem statement, the candidate understands all the aspects of the problem statement and can connect them well.	Given the above primary problem statement, able to come up with questions to gather the rest of the requirements. Interviewer may direct the discussion.	Given the primary problem statement, able to come up with questions to gather the rest of the requirements.
Problem Solving(Design/Algorithm)	Interviewer to detail out Inverted Index, Tokenization, Ranker aspects	Candidate expected to identify needs of inverted index, tokenization, ranker aspects with guidance	Candidate expected to identify needs of inverted index, tokenization, ranker aspects