Syllabus

Topic

1. Tool setup;
2. Maven, git, github and PR
3. Java Core
    1. Java Basic
    2. OOP - Abstract, Interface, Inner Class, String, StringBuilder, StringBuffer
    3. Except Handling, Runtime, compile time
    4. Enum
    5. Multi threading
    6. Collections
    7. Java 8 new features - Optional, Lambda, Stream
        1. Stream Exercise
        2. Lambda exercise
4. Core Desgin Pattern
    1. Singleton
    2. Builder
    3. Factory
5. Database
    1. MySQL
    2. MongoDB
    3. Graph Database
6. REST API & PostMan
7. SpringBoot
    1. Write a project using Spring boot, JPA, MySQL
    2. rewrite the project using MongoDB
    3. Also include GraphQL
8. Service Layer IOC
9. Data Access - JPA & Hibernate
10. Spring Secuirty
11. Test Framework

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    1. Unit Test
        1. Junit
        2. Mockito
        3. PowerMockito
    2. Integration Test
    3. Testing Report
        1. Jacoco
12. Spring MVC and Dispatcher Servelet
13. Spring AOP
14. Spring other techniques
    1. Spring Batch
    2. Spring task for Cron job.
    3. Interceptor
    4. Webflux
15. Cloud Concepts
    1. CI/CD - Jenkins
    2. AWS
    3. Deploy your springboot app to aws
16. Logger and Splunk
17. Microservice/Kafka
    1. Microservice architecture
    2. Kafka
        1. Message Queues
        2. Topics for Pub-Sub
        3. Producer, Consumer
        4. Write a project using kafka
18. System Design
    1. theories
    2. Excercies with draws.io
    3. system design demo
19. Docker & K8S
20. Front-End
    1. HTML,CSS, bootstrap

    2. JavaScript, Dom, BOM, type script, node.js
    3. React, Angular
21. kubernetes
22. General Topics
    1. one day as a software engineer
    2. one sprint as a software engineer
    3. Testing as a software engineer
    4. how to do on call
    5. how to do deployment
    6. Soft skills in interview
    7. tools:
        1. jira
        2. Confluence
        3. splunk
        4. grafana
        5. SonarQube
23. Other (can be skipped if algortihm coding is strong in that batch)
    1. algorithm template demo
    2. QA: previous interview questions
    3. Mock Interview
24. Final Project
    1. extend features for the class project
    2. launch and learn a big spring boot project with multiple modules
    3. Launch and learn a microservice project (the microservice version of the previous project)
    4. write a project from scratch (we provide the UI code and you need to implement the backend APIs)

Every concept is going to be explained through code examples, hence the order of topics can vary.

Algortihm

1 - 4 weeks: 1 or 2 coding problems each day

5 - Marketing: 2 - 4 coding probelms each day.

How to get Algorithm assignments? The algorithm assignments would be sent to **assignments** channle in slack.
How to submit your algorithm assignments? Share you screenshot to **leetcode** channel in slack. remember add `@channel` to notify all of people in that channle.

Assignments

How to submit your hws? Raise a **PR(pull request)** to the branch of repository, the branch name would be your name.

get more details from the README.md file in repo.

Short Questions

- write the interview questions.

Coding Questions

- write the coding assignments.