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Core Java Basics

1. JDK Setup
2. First Program
3. Developmnt structure
4. JDK 15 and Eclipse Setup
5. Programing elements
6. Printing in Command prompt
7. Local variables
8. Unary Operators
9. Command line arguments
10. if block
11. nested if blocks
12. if blocks with unary operators
13. else block
14. if-else blocks inside if block
15. if-else blocks inside else block
16. if-else blocks with unary operators
17. ternary operator
18. switch-cases
19. for-loop

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20. break and continue
21. nesting of loops
22. labeled loops
23. for-each loop
24. while loop
25. do-while
26. Methods
27. attributes
28. SIB
29. IFR and Multiple classes
30. Object and reference variable
31. this key word
32. constructors
33. constructor overloading and this()
34. IIB
35. objects count
36. Encapsulation
37. Inheritance
38. super() calling statement
39. packages

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40. access levels
41. abstract classes
42. interfaces
43. method overloading
44. method overriding
45. auto widening
46. explicit narrowing
47. auto upcasting
48. explicit down casting
49. achieving polymorphism
50. final key word
51. classpath
52. Javadoc, javap and jar commands
53. Scanner class
54. Eclipse

Core Java Advanced

1. Wrapper classes basics
2. auto boxing and auto unboxing
3. why do we require Exception Handling

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4. try-catch
5. try-catches
6. try-catch-finally
7. exceptional conditions of finally
8. return statement
9. Errors and Exceptions
10. Checked and Unchecked
11. throws
12. throw
13. throws in overriding
14. assertions
15. toString
16. equals
17. hashCode
18. Garbage Collection and clone
19. reflection api
20. basics
21. advanced
22. annotations
23. static imports

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24. why do we required an inner classes
25. non static, staic and local inner classes
26. anaymous inner class
27. lambda expressions
28. basics
29. synchronization
30. thread life cycle
31. accessories
32. basics and important methods
33. StringBuffer
34. Formatters
35. Regular expressions
36. DateFormatter and NumberFormatters
37. arrays
38. introduction
39. basic operations
40. different collections
41. list
42. queues
43. avoiding duplicates (set)

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44. maps
45. iterators
46. sorting
47. TreeSet and TreeMap
48. sorting map based on values
49. modifying collections classes as synchronized
50. concurrent package
51. sort even and odd separately
52. basics
53. advanced
54. basics
55. readers and writers
56. streams
57. serialization
58. adv serialization and externalization
59. PrintStream
60. serialVersionUID
61. forEach() method in Iterable interface.
62. default and static methods in Interfaces.
63. Functional Interfaces and Lambda Expressions.

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64. double colon (::) Operator
65. forEach in detailed
66. Java Streams creation
67. Java Streams Usage
68. Java IO improvements.
69. Java Date and Time API Improvement
70. Collection API improvements
71. Concurrency API improvements

General Logical Coding

1. Display patterns set1
2. Display patterns set2
3. Display patterns set3
4. Display patterns set4
5. Display patterns set5
6. Number system set1
7. Number system set2
8. Arrays set1
9. Arrays set2
10. Arrays set3
11. Arrays set4
12. Strings set1
13. Strings set2
14. Strings set3

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15. Strings set4
16. Strings set5
17. Strings set6
18. Strings set7
19. Strings set8
20. Strings set9
21. Strings set10
22. Strings set11
23. Strings set12
24. Strings set13
25. Strings set14
26. Multiple Separators
27. play around with the file system
28. word count in the file

Data Structures

Data Structures set1

Data Structures set2

Data Structures set3

Data Structures set4

Data Structures set5

Data Structures set6



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Data Structures set7

Data Structures set8

Data Structures set9

Data Structures set10

Data Structures set11

Data Structures set12

Algorithms

1. recursive algo set1
2. recursive algo set2
3. recursive algo set3
4. recursive algo set4
5. sorting algo set1
6. sorting algo set2
7. search algo set1

JavaScript

1. basics

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1. why do we require
2. pre requisites
3. softwares required.

2. output

1. write
2. log
3. alert

3. input

1. prompt
2. confirm

4. events

1. onclick
2. onload
3. onchange
4. onblur

5. execution

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1. functions
2. var
3. let
6. default
 1. values
 2. typeof
 3. default with if
 4. double equals (==)
 5. triple equals (===)
7. basic form validations
 1. text, password and textarea
 2. radio
 3. checkbox
 4. select
 5. multi select

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8. getElementById

1. p, div and span
2. swap
3. hidden and show
4. change color

9. display validation errors

1. single field
2. multiple fields

10. objects

1. with fields
2. with functions
3. with nested

11. arrays

1. basics
2. sort
3. array with objects

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12. form data manipulation

1. select all
2. reverse select all
3. dynamic population
4. transfer options
5. string functions
6. trim
7. email validation
8. multi dimensional array
9. sorting records based on column
10. sorting options of drop down

SQL

1. Oracle 11g Installation
2. SQL Developer installation

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3. Oracle 11g un installation
4. DDL and DML
5. DQL
6. NOT NULL, UNIQUE AND PRIMARY
7. FOREIGN KEY
8. ONE-TO-ONE
9. ONE-TO-MANY
10. MANY-TO-MANY
11. DATE AND TIMESTAMP
12. DESIGNING EMPLOYEE DATABASE
13. 1NF, 2NF and 3NF
14. Designing Car database

JDBC

1. Setup
2. First Program
3. Various ways of insert
4. Fetching
5. try, catch and finally
6. External properties file
7. Util dev and Tx management

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8. Prepared Statement
9. Callable Statement
10. Eclipse usage, Scrollable and Updatable
11. batch updates
12. BLOB datatype
13. Metadatas
14. Reading DB keys
15. savepoint
16. rowid
17. POI setup
18. Storing masterdata in db
19. CRUD operations

Servlets

1. Setup
2. First Servlet
3. Input to Servlet
4. Client side dev
5. Backend Dev
6. war dev
7. With eclipse

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8. Again backend dev
9. Welcome file list
10. getParameter()
11. Form Data
12. constants
13. life cycle
14. architecture
15. doGet and doPost
16. init methods
17. RequestDispatcher
18. sendRedirect
19. why session tracking
20. hidden form fields
21. url rewriting
22. cookies
23. HttpSession
24. Filters basics
25. dispatcher types
26. diff containers
27. diff listeners

JSP

- 1.JSP Scripting Elements
- 2.Using Java code inside JSP
- 3.JSP implicit objects



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- 4. page directive
- 5. include directive and JSP actions
- 6. JSP useBean
- 7. JSP EL

Rest Webservices

1. Softwares Setup (JDK15, Winrar, editplus and Eclipse)
2. SpringBoot First Application
3. Rest Webservices return types
4. Rest Webservices Input (PathVariable)
5. Rest Webservices Input (RequestBody)
6. Rest Webservices Input (RequestParam)
7. GET mapping in detail
8. Image file upload
9. Diff file uploads
10. File upload along with JSON object

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11. Multiple Files and Multiple JSON objects
12. Excel File upload and processing with POI
13. text file upload and inserting into db
14. Excel file upload and inserting into db
15. ResponseEntity - body and status code
16. ResponseEntity - body, headers and status code
17. ResponseEntity - File Download
18. Mail Sending setup and sending text mail
19. mail with HTML body
20. mail with attachment
21. mail with programmatic configuration(sending from a specific mail account)
22. email id verification

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Spring Boot

1. Softwares Setup (JDK15, Winrar, editplus and Eclipse)
2. SpringBoot first app
3. SpringBoot 2nd app

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4. Spring Boot Auto Configuration
5. Spring Boot Dev Tools
6. Spring Boot Command Line Arguments
7. Spring Boot Exception handling
8. Spring Boot JAR Development
9. Spring Boot WAR Development

Spring Microservices

8. Micro Services Architecture
9. Micro Services Setup
10. RestTemplate
11. Feign client with Example
12. Feign client with Zipkin Server
13. Feign and Ribbon client with Example
14. Feign, Ribbon and Eureka
15. Feign, Ribbon, Zuul and Eureka
16. Feign, Ribbon, Zuul and Slueth

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17. RabbitMQ and Zipkin
18. Spring Cloud Config server
19. Spring Cloud Config client
20. Spring Cloud Actuator
21. Spring Cloud Bus
22. Spring Hystrix

Spring Data JPA

1. Setup
2. Save operation
3. Save All operation
4. PUT and PATCH operations
5. READ and DELETE operations
6. All Methods Of CRUD Repository
7. Generators
8. For Unique Columns
9. For NON Unique Columns
10. Where clause with Boolean LIKE
11. Where clause with Boolean AND
12. Where clause with Boolean OR

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13. Table, Column, Not-NULL and Unique
14. Where clause with Greater Than (>) and Less Than (<)
15. Reading Single Column
16. Reading Multiple Columns
17. DTO Development
18. DTO Single Join
19. DTO Multiple Join
20. one-to-one uni directional
21. one-to-one bi directional
22. one-to-one sharing key (MapsId)
23. one-to-many uni directional
24. one-to-many bi directional
25. many-to-many

Spring Security

1. Security Setup
2. Inmemory Credentials and Password encoding
3. Reading Credentials from DB
4. Authorization Basics



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5. Authorization Patterns
6. Testing Authentication through ARC
7. Setting up Angular
8. Testing Authorization through Angular
9. Interception Filters
10. Guard Services
11. JWT implementation in Spring Boot app and calling from Angular app

Angular

1. Installations
2. Un Installations
3. Creating a project and understanding default code
4. Creating a component
5. Creating a component with different options
6. Creating a component without ng command
7. typescript datatypes and fields declaration
8. typescript methods declaration
9. typescript methods body development

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10. access specifiers and constructor
11. bindings
12. directives
13. template variable
14. template driven forms
15. reactive forms
16. http client
17. routing
18. modular development
19. typescript compiler
20. type assertion
21. arrow functions
22. directives
23. http with template variables
24. one-to-one mapping
25. one-to-many create and read-all
26. one-to-many read, update and delete
27. managing checkbox
28. many-to-many CRUD

Java FSD Practical Dev



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- 1.Spring boot first app
- 2.CommandLineRunner
- 3.Data JPA setup
- 4.Data JPA Basics
- 5.Custom Repository methods
- 6.Angular Client
- 7.Angular Client with template variable
- 8.Angular Client with template driven form-CREATE
- 9.Angular Client with template driven form-CREATE with Validations
10. Angular Client with template driven form-READ
11. Angular Client with template driven form-UPDATE and DELETE
12. Angular Client with Reactive Forms CREATE
13. Angular Client with Reactive Forms CREATE-Validations

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14. Angular Client with Reactive Forms READ, UPDATE and DELETE
15. Lombok
16. MySQL Usage
17. Oracle Usage
18. Example1
19. Example2
20. Example3
21. Example3 continue ...
22. Data Poulation
23. Adv methods... set1
24. Adv methods ... set2
25. Adv methods ... set3
26. Adv methods set4
27. one-to-one setup
28. one-to-one unidirectional
29. one-to-one bi-directional
30. one-to-one mapsId
31. one-to-one client dev CREATE

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32. one-to-one client dev RUD
33. one-to-many uni
34. one-to-many bi
35. one-to-many imp points
36. one-to-many clientside dev1
37. one-to-many clientside dev2
38. one-to-many clientside dev3
39. many-to-many server side
40. many-to-many services and controllers
41. many-to-many client side create
42. many-to-many client side read, update and delete
43. BootStrap Setup and NavBar dev
44. DashBoard dev
45. DashBoard With Spring Security
46. Pagination in Angular
47. Security Headers
48. JWT Implementation



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- 49. AWS account creation, EC2 creation and mobaXterm installation
- 50. JDK and Tomcat installations
- 51. jar and war deployment
- 52. jar and war deployment with angular code
- 53. MySql Installation and Usage in EC2 instance