Roadmap

⇒ Java :-

i) OOPS
(ii) Solid principles   [1-2 days] today
(iii) Static, abstract, interface, final]   2-3 hours
iv) Access modifiers   ]
v) Diamond problem   ]
vi) Strings (Immutable, SCP, StringBuffer, StringBuilder)
vii) Exception's and Error's (Hierarchy, Checked and unchecked)
(viii) Collections] (Generics , [Hashmap] , Type erasure)
                        autoboxing, unboxing)

                    (Serializable (Transient))

        ↳ List

    ArrayList, Linked List   Set, → TreeSet [working]
                    Map...

(ix) Comparable ver Comparator.

x) Fail safe and Fail fast pointers]

xi) Immutable class def and creation.

(xii)   Multithreading
        ↳ Thread.run(); vs thread.start();
        ↳ Runnable, callable   } Creation
        ↳ Future, Comparable future (async)   1/2 days
        ↳ Executor framework [Fork join pool]
        ↳

        ↳ Wait and notify, notifyAll();
        ↳ Locks
        ↳ Synchronized Method/Block   } Management
        ↳ Deadlock
        ↳ Semaphores
        ↳ DPP (Dining Philosopher problem)
        ↳ Virtual threads
        ↳ Deamon threads (eg. C)

(viii) Garbage collection
    ↳ Stages of G.C.
    ↳ Working.
    ↳ Visual VM, Profiler.
    ↳ Dump analysis

(xiv) Functional Interface / Lambda/ SAM.
    i) Predicate, Consumer, Supplier, Function
    (ii) Method references, Constructor refs
            Exception ref.
    (iii) Optional | (Process)
                 a.book()
        Deamon]
        Orphan's =

xv) Stream api's ✶✶✶
    ↳ Intermidiate / Terminal Operations
    ↳ Important patterns
          ↳ Grouping
          ↳ Reduction
          ↳ Flatmap.

    ↳ Parallel streams
        ↳ Fork join pool
        ↳ Problems =

(xvi) AOP (Aspect Oriented Programming)
    ↳ Point cut
    ↳ Regex   ↳ Rest Controller (Advice)
    ↳ Use cases

✩ Tricky questions
    ↳ this us super
  ↳ Casting
  ↳ Anonymous class
  ↳ Red and black (BEST)
  ↳ shallow and deep copy / defensive copy.

- Enums
- Sealed class
- Instant, ChronoUnit, Duration, Period
- BigDecimal / BigInteger ~ ~
- Regex
- Scanner vs Buffer Stream.
- Starvation and Fair Locks
- Virtual threads