 What is a data structure in Java?

 Difference between Java primitive data types and objects in collections.

 Explain linear vs non-linear data structures.

 What is an Abstract Data Type (ADT)? Give examples

 What is the difference between static and dynamic data structures?

 What is time complexity?

 What is space complexity?

 Explain Big-O, Big-Ω, and Big-θ notations.

 What is amortized analysis?

Difference between best case, average case, and worst case analysis.

 What is an array?

 Advantages and disadvantages of arrays.

 What is the difference between one-dimensional, two-dimensional, and jagged arrays?

 How are arrays stored in memory?

What is dynamic array

Arraylist vs vector

  What is the difference between Array and ArrayList in Java?

 Difference between LinkedList (Java util) and array-based list

 When would you use an array over a linked list?

 What is the time complexity of insertion, deletion, search in arrays?

 What are real-life applications of arrays?

 What is the difference between array and pointer representation?

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 What is the role of Java Collections Framework in implementing DS?

What I scollection framework why we need it

 Explain the difference between Vector and ArrayList.

 Why are Java Strings immutable? How does it impact performance?

Stribgbuffer vs string builder

 What are Java Generics and why are they useful in collections?

 Difference between shallow copy and deep copy in Java data structures.

Which data structure is used to perform recursion?

 What is a string?

 Difference between character array and string.

 Why are strings immutable in some languages?

 What is string interning?

 How does Java store strings internally?

 What is the difference between == and .equals() for Strings?

 Why is StringBuilder preferred over String in concatenation?

 Difference between mutable and immutable objects in Java.

 How does hashCode() affect Strings in HashMap?

 Applications of strings in computer science.

 Difference between substring and subsequence.

 What is pattern matching in strings?

 What is a palindrome string?

 Difference between String, StringBuilder, and StringBuffer (in OOP languages).

Types of package in java

Does java compiled in one version run in another version

Jvm indepth and garbage collwcotr

Method area

Native satck

Db:

Which database is more efficient

How will u store image ind b

Write query fro primary key and foreign key

Why sql

B++ tree,why b++ is used t store tuple

Indexing in dbms

Window function

Ddl dml diff

Composite key ,unique key and primary key

Unique constraint can hold a null value

Joins ,right join,

Left join

Self join

Difference between truncate and delete and drop

File system vs rdbms

Mormalization ocnept

Diff between primary and uniquqw key

Sharding

Replication

Load balancing

What ist the conent resid einside pageing -byte code

Find 999th salary person salary

Sql which clause execute first select form group by where having

Web dev

Where html is running

Why it is running in web

What is web servert

Local host

How u deploy java project on web

Api vs rest api

Loop backa dress

Types of erro in web

Functional and class component

Hooks inr ract

Functional vompoent fileter

Map reduced filter

Container vs virtual machine

Network:

Server socket

How packet travel through network

Public and private ip

What is vpn ad why it used

How to derive time complexity

Port number

virtualization

Mac address

Three way handshake

Unicast,mulitast ,broadcast

Osi layer full

Tcp,udp

Persisitent vs non persistentn

How do u find lost packet in concept of packet tracer

Error detection and recovery

Ipv4 vs ipv6

Subnet

Dns

Connection oriented protocol

http vs https

securuity protocols

Os:

Working of os internally

Components of os

Types of interrupt

Fat and nat

Ipc

Demand paging

Thrashing

Page repalcemnt algorithm

Bamkers algorithm

Os boot layer

Diff between ram and rom

Semaphore

Segmentation & fragmentation

Deadlock and avoidance ,prevention method

Process vs thread

Memory leak

Round robin all scheduling algorith

Find process id in windows

Process thread

Page falut

Preemptive vs non primitive schedule

Convey ef Page replacement techniques

Mutex

Basic linux commands

Pcb

Revese stirng without loo[

Is internal fragment aand external fragmentation rel

What is comapaction

Process state

fect

Dsqn

Deletion of node form any psoiton form odubly linekd list

Fibonaccci using recursion

Array rotation

Kth larget elemtnt

Transpose of matircx

Program to find minimum elemnt in stack

Reverse a singly linked list

Buys and sell stock

Find second largest element

Min elemet in a tree

Buffer reader program

File program to count number the number of occurenc e of word in a file

Queue -enqueu ,dequeu,with exxmaple

Explain dequeue and linkedlistusing scenario

Types of dequeueue

Binary tree and binary search treee

Double pointer

Linear and non linear

Structure padding

How many argument in calloc()

Segemntaiton’lru cache

Void and null pointer

Hadshing open closed hashin

Bfs ,dfs

Compiler vs interpeter

Call by value ,call by ref

Strucuutrre and union size

Static function

Inline function

Malloc and calloc which takes more meory

Linked lsist types eacha dvanatge and disadvantage

Heap

Single linked list vs double linkeds complexity

Best sorting alogo why

Bubble q

Quick sort

Traversal inorder preorder post order traversal which gies in ascending order I bimanary search

Elete middle elemtn in circular linked list

How to traserve data in array,lined list