INTERVIEW QUESTIONS

TABLE OF CONTENTS

|  |  |
| --- | --- |
| TOPICS | PAGE NO |
| 1. HADOOP | 3 |
| 1. PYTHON | 5 |
| 1. DEVOPS | 7 |
| 1. TECHNICAL QUESTIONS | 9 |
| 1. GENERIC QUESTIONS | 10 |

HADOOP

1. Difference between "Sort By" and "Group by" in Hive. How they work?
2. If we use the "Limit 1" in any SQL query in Hive, will Reducer work or not.
3. Difference between Sort By and Order By
4. What is the difference between partitioning and bucketing a table in Hive?
5. How to set variables in HIVE scripts?
6. How to select current date in Hive SQL?
7. After adding a partition to an external table in Hive, how can I update/drop it?
8. How to delete and update a record in Hive?
9. How does impala provide faster query response compared to hive?
10. Hive cluster by vs order by vs sort by
11. How to load data to hive from HDFS without removing the source file?
12. How to Access Hive via Python?
13. Loading Data from a .txt file to Table Stored as ORC in Hive
14. How do you make a HIVE table out of JSON data?
15. How to convert .txt file to Hadoop's sequence file format?
16. How to use sqoop to export the default hive delimited output?
17. Sqoop import having SQL query with where clause?
18. How to do Sqoop Incremental Import?
19. Sqoop import without primary key in RDBMS?
20. how sqoop import multiple tables?
21. What is the difference between --split-by and --boundary-query in SQOOP?
22. What is --direct mode in sqoop?
23. Difference between --fileds-terminated-by & --input-fields-terminated-by in sqoop hive commands
24. What is the difference between map and flatMap and a good use case for each?
25. What is the difference between cache and persist?
26. What are workers, executors, cores in Spark Standalone cluster?
27. Spark - repartition() vs coalesce()?
28. Apache Spark: The number of cores vs. the number of executors
29. How to read multiple text files into a single RDD?
30. Why) do we need to call cache or persist on a RDD?
31. How to stop INFO messages displaying on spark console?
32. How to show full column content in a Spark Dataframe?
33. How to change column types in Spark SQL's DataFrame?
34. How to convert rdd object to dataframe in spark
35. How to print the contents of RDD?
36. Apache Spark: map vs mapPartitions?
37. How do I add a new column to a Spark DataFrame (using PySpark)?
38. How to make saveAsTextFile NOT split output into multiple file? in spark?
39. How to change a Dataframe column from String type to Double type in pyspark?
40. How to save DataFrame directly to Hive using spark?

PYTHON

|  |  |
| --- | --- |
| 1 | Dict |
| 2 | List |
| 3 | Tuple |
| 4 | Differences for above 3 |
| 5 | Unit testing |
| 6 | Exception handling |
| 7 | virtualenv |
| 8 | Looping |
| 9 | DB connections |
| 10 | File – Reading, writing, |
| 11 | String problems |
| 12 | PEP8 |
| 13 | Pip install |
| 14 | ignore topics if there is no experience with frameworks like Flask or DJango |
| 15 | built in functions like Help, dir |
| 16 | \*args, \*\*kwargs |
| 17 | Monkey patching? |
| 18 | Best coding practices/standards |
| 19 | Security questions |
| 20 | Performance questions |
| 21 | How do you calculate the square root of a number in python without using any built in functions.You can use Addition,division,multiplication,subtraction to achieve the result. |
| 22 | Write program to print multiplication table. |
| 23 | Write program to reverse the string [ different options , like using standard function or using loop etc ] |
| 24 | Difference between dictionary, list, tuples |
| 25 | Write program to count the number of occurrences of chars in a string. Example : str ='aabbccc' o/p 2a2b3c |
| 26 | How do you calculate the square root of a number in python without using any built in function. You can use Addition, division, multiplication, subtraction to achieve the result. |
| 27 | How do you compare two strings and verify if they are anagrams. |
| 28 | Check whether a number is Prime or not. If prime display it as prime .if not prime find its prime divisor |
| 29 | “Find 24 sum of 6 the numbers 56 in the sentence.”( sum of numbers in the strings) |
| 30 | Object oriented programming with example |
| 31 | How do you string reversal using 'for' loop |
| 32 | Swap cases in a string |
| 33 | Find consecutive character count in string |
| 34 | Count of characters in string |
| 35 | Permutation & combination |
| 36 | Vowel count in a string |
| 37 | Multiplication table |
| 38 | Find Prime number |
| 39 | Sort list based on second character in each element in string |
| 40 | extract number and alphabets in separate list |
| 41 | find Palindrome |
| 42 | Anagram pattern |
| 43 | Square root a number without math package |
| 44 | Pattern match in a string |
| 45 | Pythagoras theorem |
| 46 | Convert timestamp to date format |
| 47 | get web service information using requestlib |
| 48 | Lambda operations [a,b,c,d] => [a1,b1,c1,d1] without loop |
| 49 | Polymorphism in real-time concept |
| 50 | Print longest substring which is alphabetically ordered |
| 51 | Split the phone number into 3/3/4 without using map function |
| 52 | Validate if given input is valid email and get the extension |
| 53 | Print first occurrence of each repeating character |
| 54 | Count number of capital letters in a file |
| 55 | Remove blank spaces in string |

DEVOPS

* GIT
  1. Git branching strategy
  2. Version controlling
  3. How you will integrate Jenkins with GIT
  4. Need for Git
  5. Need for branching in Git
  6. If not Git where would be the organization storing its source code
  7. How are Git, Maven, Jenkins are connected ?
* MAVEN
  1. Maven cmd to run locally
  2. How to build a Maven project
  3. Maven lifecycle
  4. What is Dependency Management?
  5. What is build?
  6. Maven life cycle commands
  7. Maven dependencies
  8. how to configure plugins in maven
  9. Maven Distribution Management
  10. Active profiles in maven
  11. How to add repo to maven
  12. Maven goals and phases
  13. Have you used maven with ANT?
* LINUX COMMANDS
  1. Process check in Linux server
  2. List the process running
  3. Memory usage of Linux server
* DOCKERS
  + 1. Docker networking
    2. Docker tags
    3. Docker file creation
    4. Image and container management
* JENKINS
  1. Ci-cd pipeline stages
  2. Pipeline/free style which is better
  3. About Jenkins
  4. How to schedule job in Jenkins?
  5. How to deploy jobs in Jenkins (Any example)
  6. How to install plugins?
* ANSIBLE
  1. Ansible playbook
  2. Ansible vault
  3. How to deploy jobs from Jenkins using ansible?
  4. Ansible modules
  5. What is the use of Ansible?
* AWS
  + 1. AWS Services
    2. AWS volumes
    3. EC2

TECHNICAL QUESTIONS

* 1. explain 7 layers of OSI architecture(Operating systems)
  2. Difference between compiler and interpreter
  3. How does a compiler work(explaining phases of compiler-compiler design)
  4. Difference between assembly code and machine code and an example for assembly code
  5. oops concepts in java

GENERIC QUESTIONS

* 1. Prepare 2 mins self-introduction with total experience and relevant technical experience.
  2. About the projects(both GFT and asset)
  3. explaining different sorting algorithms
  4. How do you string reversal using 'for' loop
  5. Fibanocci program
  6. Fibanocci using functions
  7. Check whether number is prime if not print it’s factors ( just pseudocode)
  8. Swap cases in a string
  9. Find consecutive character count in string
  10. Count of characters in string
  11. Permutation & combination
  12. Vowel count in a string
  13. Multiplication table
  14. Find Prime number
  15. Sort list based on second character in each element in string
  16. extract number and alphabets in seperate list
  17. find Palindrome
  18. Anagram pattern
  19. Square root a number without math package
  20. Pattern match in a string
  21. Pythagoras theorem
  22. Convert timestamp to date format
  23. get web service information using requestlib
  24. Lambda operations [a,b,c,d] => [a1,b1,c1,d1] without loop
  25. Polymorphism in real-time concept

Real-World Problem Solving Questions:

1. There are 7 weights. 6 are of same weight. 1 is less in weight. In 2 chances you have to find which of the seven is a lesser weight. You will be given a balance to weigh them.
2. If you look at the clock and the time is 3:15, what is the angle between the hours and the minutes hands?
3. i immerse a cube fully in red paint how any cubes will not get wet
4. our investment bankers need to cross a bridge at night to get to a meeting. They have only one flashlight and 17 minutes to get there. The bridge must be crossed with the flashlight and can only support two bankers at a time. The Analyst can cross in 1 minute, the Associate can cross in 2 minutes, the VP can cross in 5 minutes and the MD takes 10 minutes to cross. How can they all make it to the meeting in time?
5. You are given a 3-gallon jug and a 5-gallon jug. How do you use them to get 4 gallons of liquid?
6. You are given 12 balls and a scale. Of the 12 balls, 11 are identical and 1 weighs slightly more. How do you find the heavier ball using the scale only three times?
7. A windowless room has 3 lightbulbs. You are outside the room with 3 switches, each controlling one of the lightbulbs. If you can only enter the room one time, how can you determine which switch controls which lightbulb?
8. Three envelopes are presented in front of you by an interviewer. One contains a job offer, the other two contain rejection letters. You pick one of the envelopes. The interviewer then shows you the contents of one of the other envelopes, which is a rejection letter. The interviewer now gives you the opportunity to switch envelope choices. Should you switch?
9. A car travels a distance of 60 miles at an average speed of 30 mph. How fast would the car have to travel the same 60 mile distance home to average 60 mph over the entire trip?
10. Dick and Jane each saved $3,000 in 1989. In 1990 Dick saved 8 percent more than in 1989, and together he and Jane saved a total of $5,000. Approximately what percent less did Jane save in 1990 than in 1989?
11. One hour after Yolanda started walking from X to Y, a distance of 45 miles, Bob started walking along the same road from Y to X. If Yolanda’s walking rate was 3 miles per hour and Bob’s was 4 miles per hour, how many miles had Bob walked when they met?
12. At what time in between 6:00 pm and 7:00 pm, will the minute hand be ahead of hour hand by 3 minutes?
13. What is the angel between minute hand and hours hand, when the time is 4:57 PM. Try this out for different timings. Try to obtain a python program for this.