Postman Placement Drive

POSTMAN

Date : 14th August, 2018

About

Postdot Technologies Pvt. Ltd. develops Postman, an API development and testing solution for developers worldwide. It also offers products to build APIs and improve developer productivity. The company builds, tests, and documents APIs that creates and sends HTTP requests, creates collections and folders to group requests logically, save requests, switches contexts, customize with scripts, testing framework, and automates collections.

Job Description

Profile : backend engineers, product engineers and platform engineers. (SLI + FTE)
Roles and Responsibilities :
Backend Engineer:
Contribute to our user-management service that handles data for our 4million+ users. You'll be working with AWS, NodeJS, Docker, and WebSockets,
and keep the system scalable and highly available to ensure a seamless experience for our users.
Product Engineer:
Implement features in Postman's client applications, web services, and products. This will involve contribution to open-source components, and an emphasis on testing, browser-compatibility, and responsive design. You'll be working with React and Electron to build interfaces that help our entire user-base interact with our services.
Platform Engineer:
Work on efficient and reliable data pipelines to move all our analytics data across systems, and build tools to interpret this data. You'll be working with a variety of technologies including AWS, Azure, Elasticsearch, and NodeJS.

Eligibility

B. Tech : CSE | CCE | ECE
5 CGPA & above only (with no active backlog)

Procedure

1. Online Test
2. Technical Interview Round (2)
3. HR Interview Round

Result

No. of Selections : 2
Candidate : **Suraj Jain and Shaswat Dixit**

Feedback by company

Not focusing on practical application. Not going beyond what is covered in the classroom. Some basic concepts are misunderstood.

Interview Experience

By :- Shaswat Dixit

Round 1 (Coding Round)
2 coding (1 easy and 1 medium) questions and about 20 MCQs from computer programming and fundamentals in 2.5 hours on DoSelect Platform.
MCQs were very easy, completed in about 12 min.
1st coding question was simple if else based problem for printing a path using inputs given as direction and distance.
2nd question was based on data structures.
21 were shortlisted from about 142.
Round 2 (Technical Round 1 about 30 min)
Interview only asked from computer fundamentals and Resume (including Technologies mentioned and projects completed and not from programming languages).
Some of the questions are mentioned below :-
What is your favourite subject? (Ans : OS and CN)
What is virtual memory?
How are process allocated to a multiprocessor CPU?
What scheduling algorithms do you know?
How does SJF scheduling algorithm works?
How do you find process with shortest job?
What is starvation?
How will you prevent starvation? (using a priority based scheduling algorithm)
If processes with higher priority came continuously then what?
Then interviewer started asking from the projects and technologies used in that.
Project 1 (General Questions) :-
How does code instrumentation works?
How did you come up with idea to make project on that topic?

Project 2 (JS and DOM) :-
What is NoYoutube (project name)? What does it do? (it is a mozilla extension)
How does it works?
What is DOM (Document Object Model)? (related to above question)
Did you only made it for Firefox?
Project 3 (Cloud Related Questions) :-
What is Bluemix ?
What is a cloud ?
Why is this Idea of cloud famous right now and not in 1980s? (Ans : we have powerful Machines now to support it)?
Individual machines are powerful also so why companies doesn't implement their own cloud ?
What is a virtual machine?
What is advantages of a cloud ? (related to above question)
Project 4 (Databases Related Questions) :-
What is SQLite ?
What is a Flat File data storage ?
Where is Flat File used ?
What are the other types of storage ?
How a binary storage different from flat file storage ?
What is Indexing ?
How do you implement indexing ? (Ans : one way is to use a hashmap)
Why indexing is used ?
Is it good to index all the columns of the database ?
Will it make insertion slow or fast ? How ? (related to above question)
What are other methods to implement Indexed Database?
Project 5 (Networking Related Questions) :-
What is TCP ?
How TCP is different from UDP ? When will you use TCP and UDP ?
Do you know about HTTP ?
What is a peer-to-peer networking ?
How do you find your peers ?

Coding Question on paper :-
If you have an array of characters, how would you find all the substring permutations of different lengths ?
What did you do in your Internship ?
Have you heard about Postman before ?
6 were shortlisted from 21

Round 3 (Technical Round 2 about 25-30 min)
This round was based on Computer Networks, Security and Network Architecture.
What is your favourite project ? (IPConnect, a peer-to-peer multithreaded file transfer application)
Implement the Network architecture of your project on paper.
Huge Discussion on the architecture, it's limitations, solutions for those limitations.
What are the security measures you have used for your project ?
Discussion on Network Architecture of their product.
How do you provide security between client and a web server ? (HTTPS)
Full working of HTTPS ? (like handshakes , creating socket connection, sending public key to client as certificate, verifying that certificate, encrypting request, and sending response)
How do you guarantee that the same file (sent by server) has been received unmodified ? (using a checksum)
What do you do in the above process ? (related to hashing algorithms)
Name some of the hashing algorithms ?
Do you implementation of any one hashing algorithm ?
Can two different files have same checksum ?
Do you want to ask anything ?
Discussion on more network architecture.
3 were selected from 6
Round 4 (HR and Technical Round 3 combined about 20 min)
The Interviewer tells about the company's culture and how they are serious about their bug-free releases and asks about methods I use to prevent bugs in code.
Then some questions on Unit Testing and Integration Testing.
Then Interviewer asks if I want to know anything about company's culture ? Then some more chill talk.

Question Bank

Round 1

1. Design ER diagram of employee database of many companies.
2. Delete node in a binary tree.
3. Explain deadlock, starvation.
4. Why do you like OOP?
5. What are the various memory present?
6. How virtual memory works?
7. What is SCROM?
8. What is logistic regression?
9. Questions on Node, SQL, Mongo
10. Permutation of string with unique as well as repeating character.
11. Questions based on CN, DS, DBMS
12. How will you store your data?
13. Different types of hashing.
14. How uniqueness is guaranteed?
15. Time complexity of hash
16. Questions on hash functions
17. Functioning of protocols like ARP, RARP. TCP/IP, UDP
18. Where is database stored of DNS?
19. How many ISPs does world , India have?
20. Family tree to indexing(DBMS) and then paging(OS)
21. How can you remove starvation?
22. Have you ever used postman before?
23. Why JSP, what is it used for?
24. What does postman do ?
25. What is bootstrap, CSS?
26. Difference between JSP, Javascript.
27. How to find depth using frame differencing?
28. Transactions in MongoDB.
29. Questions on computer graphics.
30. What is TCP, difference between TCP, UDP, connection formation between server and client, sockets.
31. What is your favorite computer subject?
32. How does recursion work?
33. (Scheduling Algorithm) In real time if we want to give priority to process as well as give them equal interval, what to do
34. Project related
35. What is MangoDB, SQL, NodeJS. Why do we use NodeJS?About Mean Stack Exploration.
36. (Indexing)If you store mail & roll no., what will be the index?
37. What is clustered indexing
38. (Process scheduling)Explain process time finding in SJF.
39. What is cloud computing ? Ever used or not?
40. What is postman?
41. What is in I&A, 16 but Project- Explain.
42. How was abstraction implemented in your project?
43. OS related starvation, scheduling algorithm.
44. DBMS related indexing, BT trees
45. COA opcodes , operand
46. What is distance if longitude and latitude of two points is given?

46. What is distance if longitude and latitude of two points is given?
47. What is klnix?(NOT SURE WHAT IS KLNIX)
48. OS, How it handles multiple processes on a single core?
49. What is JSON? Can we use some other way to get response>
50. How does OS do scheduling of tabs in Web browser?
51. Difference between Web pages and Dynamic Web pages?
52. JSON O: { cyclic does not exist in JSON P:}
53. If an object has member variables a, b, c in this order, so will they be stored in that order or if then how will they be stored?
54. What got you interested in Computer Science?
55. Details about project n difficulties faced.
56. (DBMS transactions)Which ACID property is getting compromised in the database of your project?
57. What is hash function? Is hash theory correct practically or theoretically?
58. Cryptographic concepts.
59. What is the architecture of a peer to peer connection?
60. What are the problems you face in a subnet network that you don't in a global network?
61. Full life cycle of a HTTP request/response.
62. How to make sure if data received is valid.
63. Different hashing Algorithms.
64. Can two strings have same hash data.
65. How would you secure a data in a HTTP connection.
66. In a Master Slave Architecture which communication is better pull based or push based? Why
67. What are your favourite courses?
68. Why?
69. Why Computer Networking?
70. What is BlueMix?
71. What is cloud? Why is it popular right now?
72. What is Virtual Machine?
73. Why cloud is better to use if you are not a big company?
74. What is Virtual meaning?
75. What is L1, L2 cache?
76. Why is it faster than RAM?
77. How is data stored in switches?
78. How would you allocate process to a multi process or system?
79. What are different scheduling algorithm you know?
80. What is a process saturation?
81. How can you prevent process starvation?
82. Difference between TCP and UDP and when will you prefer one over another?
83. How HTTPS works?
84. Where is list of trusted parties for certificate verification kept?
85. What is HTTPS?
86. Difference between HTTP and web sockets?
87. Difference between TCP and UDP?
88. Structure of HTTP and TCP?
89. Time taken to send a packet from India to Canada?
90. What do you like about computer science? Do you implement in project? How?
91. Asked about my projects
92. Asked to implement components that one already implemented, Dom parser(used in his project).

Round 2

1. HTTP related questions
• Cookies
• How HTTP works
• How cookies are set
2. TCP related questions
• How it is implemented
• TCP vs UDP
• What is tunneling
3. DBMS & CN related
• How SQL exports
• Encryption vs Decryption
• Integration and Security of Packages
• Hashing
4. OS related
• Why do you like OS ?
• Scheduling Algorithm, Starvation, Multilevel queue
• Deadlock (Prevention & Avoidance)
• For one person let's say it has 2 threads and they want to communicate. How do they communicate?
5. Miscellaneous
• Generate all permutations (Coding)
• What if string has duplicate characters ?
• Optimal way to design traffic light system
• What should a programmer do to avoid mistakes done before?
• Draw diagram of Node.js.
• Describe security of an API.
• What do you learn from making first API?
• Explain server security.