1. Given a kernal code in "0"th machine. How soon you can replicate the kernal across N machines. Now if the machines has upload and download bandwidth constraints, how can you impove the copy time.

[**http://www.careercup.com/question?id=5438941951950848**](http://www.careercup.com/question?id=5438941951950848)

1. Design Short URL.
2. Implement a system so that the billionth search query at Google each day wins a car
3. given K files and N machines, N is much larger than K. given function long sum(int fileID,int machineID) which use particular machine calculate the sum of file. Question:write function which calculate the sum of all files
4. Theoretically, you have a computer that has infinite memory. You have a starting point that is a 0 (zero), and a series of zeros after that. Eventually there will be a 1 (one). You need to write a program to find the index of the first one in relation to the first zero. Go - youtube team
5. Finding the local minimal with sublinear time.
6. Design Youtube suggestion on the web
7. Design Watch next after watching the video
8. Design phone google search (or) how do you categorize the search (or) build search engine ..optimization
9. Machine Learning Design
10. Design the data structures for the Snake game
11. Given K sorted buckets which in total have N elements, merge these buckets so that the resulting bucket is also sorted. Also, do it better than O(NlogN).
12. Solve Youtube's comment-spam question

Amazon Interview Preparation

Design the recommendations list for amazon webpage

<http://kunuk.wordpress.com/2012/03/04/how-does-the-amazon-recommendation-system-work-analyze-the-algorithm-and-make-a-prototype-that-visualizes-the-algorithm/>

<http://blog.echen.me/2011/02/15/an-overview-of-item-to-item-collaborative-filtering-with-amazons-recommendation-system/>

<http://stackoverflow.com/questions/2323768/how-does-the-amazon-recommendation-feature-work>

<http://scenic.princeton.edu/network20q/wiki/index.php?title=Amazon_and_Youtube%27s_Recommendation_Systems>

Design distributed system (map-reduce and distributed has table).

How would you maintain concurrency on a shared page being edited by multiple users simultaneously.

<http://stackoverflow.com/questions/62814/difference-between-binary-semaphore-and-mutex>

What if the page is being shared using a client- server mechanism. Represent the classes and explain the thread safety mechnism to avoid editing conflicts

Imporatant Desing Question/recently asked

<http://www.careercup.com/question?id=6376647859109888>

Implement your own hashmap in java

Design the data structures for the Snake game

<http://www.ncsa.illinois.edu/People/kindr/teaching/ece190_sp11/MPs/ece190_sp11_mp5.pdf>

Design problems (restaurant reservation system)

<http://erestaurant.files.wordpress.com/2009/09/class-diagram-v1-0.jpg>

<http://devinterviewgyan.blogspot.com/2010/03/design-restaurant-reservation-system.html>

Car parking problem. An array given represents actual order of cars need to be parked. Like for example order is 4,6,5,1,7,3,2,empty. If cars are parked in some order like empty,1,2,3,7,6,4,2. Some person needs to get them into correct order, list out all instructions to the person to get in correct order with least number of swaps.

Difference between Active and Passive FTP?

 Writing a Poker game during the on-site interview which is quite efficient in terms of memory and speed.

Design Short URL.

<http://stackoverflow.com/questions/742013/how-to-code-a-url-shortener>

<https://gist.github.com/dgritsko/9554733>

<http://stackoverflow.com/questions/17928158/find-top-10-most-frequent-visited-url-data-is-stored-accross-network>

How would you split a search query across multiple machines?

http://www.careercup.com/question?id=5377673471721472