**BQ**

1. The hardest thing you achieved:

I think the course project of database is the hardest thing I achieved. In this course I need to design a real course registration system for students. I need to use database to store the data, and I need to design an easy and beautiful interface for users. It is really a hard thing because I never design a sophisticated system like this before. However, after some time’s study and the help of my teammate, we finish the project perfectly and get a high grade.

1. Your failure and did you bounce back

When I first take part in the GRE exam, I lost it because I just got 309 points and I could not apply for Northeastern University because it was not a good grade. But after several weeks study, My English reading and vocabulary made great progress. I read many articles from newspaper every day, and when I encountered a strange word, I would take a note. In the second examination, I got 321 points, the result helped me apply for Northeastern University successfully.

1. How could you friends describe you? (45s)

They may say I am a friendly, patient, humorous and helpful person. I love to communicate with others to solve a difficult problem and cooperate with others. I love to share my story and happiness with friends and will go to theatres for films with them. I am always confident and willing to challenge myself. I love creative thoughts and always want to come up with new ideas.

**Technical Questions (agree or disagree)**

1. Linear search can be faster than hash table look up

I disagree. Because time complexity of linear search is O(n), time complexity of hash table look up is O (1), so hash table look up should be faster than linear search.

1. O(1) algorithm cannot be optimized

I agree. O(1) algorithm means the time complexity is a constant number, the time complexity will not be affected by the length of input array, so it is the fastest algorithm.

1. Sorting cannot be done in O(N)

Totally, I agree. In most current popular languages (Java, Python, etc.), the built-in sort function use the quicksort as the algorithm of sort, and the time complexity is O(n log(n)), so sort cannot be done in O(N). (Special cases may be done)

1. Same program, 1 thread can be faster than 2 threads

I disagree. 2 threads could only add extra work, it cannot speed up the running of one single program. 2 threads could help do more work and solve more problems.

1. 32bit unsigned integer and 32bit signed integer 覆盖范围相同

I disagree. The range of 32bit unsigned integer is from zero to two power thirty-two minus one,

32 bit signed integer, because the first bit represents the sign, you know, 0 is positive, 1 is negative, so the range of 32 bit signed integer is from minus two power thirty-one minus one to two power thirty-one minus one.

1. Use real world example to describe binary search to non-technical people (2 minutes)

When teacher use excel to sort students’ grade and want to find how many students’ grade is above 60, he can first find the medium value of all grades and find whether the medium value is above 60 or below 60. If the medium value is above 60, the teacher should find the medium value between the medium of all values and the bottom grade, and compare it with 60. If the medium of all grades is below 60, the teacher should find the medium value between the medium of all grades and the top grade, and compare it with 60, and so on. The target of binary search is to use the medium value to make the search range smaller and smaller.