RECRUITMENT PROCESS AND INTERVIEW EXPERIENCE

Interviewee Testimonials

Company Break-Up

S.No.	Name of the Company	Number of Offers	Streams	CTC(Ex : 500000)	Sector
A	Microsoft IDC	6	CS	3902200	IT
B	Nutanix	2	CS	3948000	IT
C	DE Shaw	2	CS	4300000	IT
D	Cisco	3	ME Embedded/BE CS	1596800	ET
E	Samsung Blore	5	A7, A3, A8	3900000	IT
F	Samsung Blore	15	A7, A3, A8	2700000	IT
G	Citi Bank	8	All BE	1360000	IT
H	Axis Bank	2	All BE	1296089	BF
I	Uber	4	A7, A3, A8	3602200	IT

J	Samsung Noida	3	A7, A3, A8	1950000	IT
K	Arcesium	2	A7, A3, A8	3500000	IT
L	Directi	2	A7, A3, A8	2982580	IT
M	Goldman Sachs	7	A7, A3, A8	2982580	IT
N	Microsoft GSMO	3	All BE, All ME	2040236	IT
O	Tower Research Capital	1	All BE	3200000	IT
P	JSW	1	A4, AB	1500000	MF
Q	Facebook London	1	All BE	5000000	IT
R	Sling Media	1	All BE	1500000	IT
S	Tata Steel	2	A4	1011000	MF
T	JDA Software Solutions	1		800000	IT

1	Bajaj Auto	2	A4, AB	875000	MF
2	Uber India	4	A7, A3, A8	3602200	IT
	Uber US	2	A7, A3, A8	9935240	IT
3	Rubrik US	1	A7, A3, A8	7977200	IT
4	KPIT	6	A7, A3, A8	4394760	IT
5	Flipkart APM	1	All BE, All ME	2604200	IT
6	Goldman Sachs	1	All BE, All ME	3150000	IT
7	DE Shaw	2	A7, A3, A8, ME CS,SS	4700000	IT
8	Microsoft IDC	3	A7, A3, A8, ME CS,SS	3900000	IT
9	Nutanix	3	A7, A3, A8	3948000	IT
10	Samsung Bangalore Research	4	A7, A3, A8	3900000	IT
11	App Dynamics	3	A7, A3, A8	3021434	IT

12	Adobe BE	2	A7, A3, A8	2035847	IT
	Adobe ME	1	ME CS, SS	2035847	IT
13	Oracle	9	All BE, All ME	2200000	IT
14	Cohesity	2	A7, A3, A8	3166000	IT
15	PayPal	4	All BE	2510000	IT
16	Intel BE	8	A7, A3	1437000	ET
	Intel ME	20	ME CS,SS, Embedded, Micro, Comm	1772000	ET
17	Texas Instruments BE	1	A3, A8, ME Embedded, Micro, Comm	1783000	ET
18	Qualcomm ME	6	ME CS,SS, Embedded, Micro, Comm	1576000	ET
	Qualcomm BE	4	A7, A3, A8	1576000	ET
19	Cypress Semiconductor ME	4	ME CS,SS, Embedded, Micro, Comm	1287120	ET

20	Samsung Semiconductor - Software BE	4	A7, A3, A8	2300000	ET
	Samsung Semiconductor - Hardware BE	4	A7, A3, A8	2300000	ET
	Samsung Semiconductor - Hardware ME	1	ME CS,SS, Embedded, Micro, Comm	2300000	ET
21	SanDisk BE	3	A7, A3, A8	1742500	ET
	SanDisk ME	7	ME CS,SS, Embedded, Micro, Comm	1915600	ET
22	Rohm Semiconductors BE	1	A3, A8, ME Embedded, Micro, Comm	878623	ET
23	Nestle	2	A4	100000	MF
24	NetApp ME	2	ME CS,SS	1872708	IT
25	ExxonMobil	9	A1	937000	CH

26	ZenDrive	1	A3,A7,A8	2100000	IT
27	Tesco BE	4	A3,A7,A8, ME CS,SS	1918000	IT
	Tesco ME	1	A3,A7,A8, ME CS,SS	1918000	IT
28	Cisco ME	5	ME CS,SS,Comm	1596800	IT
	Cisco BE	2	A3,A7,A8	1437333	IT

29	JPMC	4	A3,A7,A8	1400000	IT
30	Mathworks	1	ME	1760100	IT
31	Myntra	5	A7	2400000	IT
32	Sapient	5	All BE, ME CS,SS	1475000	IT
33	Dell ME	2	ME CS,SS	1075000	IT
34	Swiggy	3	All BE	1700000	IT
35	GE India	1	ME	1252528	IT

36	Axxela Advisory Services	2	All BE, MBA	1100000	BF
37	Media IQ Analytics	1	All BE	1100000	CO
38	Media IQ Software	2	A3,A7,A8	1400000	IT
39	Telstra ME	1	ME CS,SS	1200000	IT
40	Indus Insights	3	All BE	1200000	CO
41	ICICI Bank	8	All BE	1600000	BF
42	Deutsche Bank ME	4	A3,A7,A8, ME CS,SS,Comm	1204040	IT
43	Toshiba BE	1	A3,A7,A8, ME CS,SS,Comm	1200000	IT
44	UBS	3	A3,A7,A8	1000000	IT
45	Microland	2	All BE	1000000	IT
46	National Instruments BE	2	A3,A7,A8	1029000	IT/ET

Cou

Sector: IT

Name: Harshvardhan Maheshwari (2014B3A70375P)

Company: Microsoft - IDC

Profile: Software Engineer

Recruitment Procedure

- Online test, Group fly round, Technical interviews.
- The online test was on co-cubes platform. It had 3 questions of 2, 3 and 5 marks respectively.
- After the online coding round, the shortlisted students were divided into 2 batches for the Group-fly round. My batch was asked a question on linked list. It was an easy problem but had a lengthy code. It is important to have practiced writing code on paper, in order to maintain speed and clarity.
- In the first technical interview, I was asked a question on trees. It was a tree traversal problem with some very specific constraints. The interviewer asked me to write the code first and then explain the same to him. He also discussed my CV simultaneously.
- My first round went very-well. So, I was directly sent to the final interviewer for the second round, which was kind-of-a mix of HR and technical. He inquired about my past internships' projects in detail. Then he gave me a question on system design. It was an elaborate problem and the discussion went on for more than an hour. In the end, he asked why I wanted to join Microsoft and what I expect from the job.

Sources of Preparation

- InterviewBit
- GeeksforGeeks
- Hackerearth - Codemonk series
- Codeforces (Virtual contests)

Courses and Certification

Data Structures & Algorithms, Operating Systems, Object Oriented Programming, Database Systems and Computer Networks

Other Relevant Information

- With respect to the online coding test, for a particular company, the co-cubes platform has a bank of questions, from which everyone gets random three. So, the questions tend to repeat. Make sure that you see all the coding test questions from the interview experiences of students from other colleges, where that company already visited.
- In the group-fly round, it is very important to explain your solution approach to the mentor near you. Don't just directly write your solution on paper and submit. Discuss your doubts, assumptions and approach with the mentor.
- Microsoft loves linked-lists. Make sure you don't ignore that topic.
- The important thing to keep in mind while solving system design questions is that you need to constantly converse with the interviewer. It cannot be a monologue. Start from the superficial level design, present your thoughts throughout, take hints from his approval/disapproval and then delve deeper. Don't rush.
- It is of utmost importance to be humble in face-to-face interviews. Confident but also humble. Nobody likes to work with a boastful person.
- You should have inside-out knowledge about each and every point in your resume. If you are not confident about a particular project, then don't write that. You can never predict which project they ask you in detail about.
- Sound grasp of main CS courses like OS, OOP etc. is imperative. Only doing competitive coding won't take you very far!

Sector: IT

Name: Utkarsh Mishra (2015A2PS0810P)

Company: Microland

Profile: Next Generation Technology Cadre

Recruitment Procedure

- **Online Test**- It had following sections:

    1. Aptitude- It was easy and consisted of verbal ability, logical reasoning and quantitative aptitude

    2. Coding Section- This section consisted of two questions to be solved in thirty minutes. Questions were easy and mainly covered strings and DP.

    Overall the test was easy but speed was required in coding required.

- **Technical Interview-** It was entirely resume based and centred around summer internship and academic projects. They were giving a lot of preference to resumes flaunting projects on Machine Learning/Artificial Intelligence. Moreover, the interviewer was very supportive and easy to get along with.

- **HR Interview-** This was more of a stress interview. The interviewer was not acknowledging the responses with ease and cross questioned each and everything you had said. Basic puzzles and one/two questions on ML were asked in addition to HR questions.

Sources of Preparation

- For Apti, basic preparation from Indiabix or examly (provided by placement unit itself) is sufficient. I would personally recommend examly over indiabix.

- Regarding Coding round, knowing the basics of data structures and basic techniques like hashing and DP is must. You can practice the questions either from geeks for geeks (preferred) or interviewbit.

- For the technical Interview, since there was nothing technical as such, make sure you know your resume in and out. Moreover it is a general suggestion (for any IT company) that if you are from a non CS background and have a high (> 9) CGPA, prepare the following two questions very well:

Why are you not going for MS?

Why are you preferring IT over (your) branch?

If you are able to convince the interviewer regarding your passion for IT through your internship and projects, then you would get past this interview easily.

- As for the HR, since many puzzles were asked, practice the puzzles from GeeksforGeeks. Also be prepared for the HR questions like strengths and weaknesses, what irritates you etc.

Courses and Certification

DSA, OOP

Other Relevant Information

Though HR questions seem to be easy, they can be sometimes tricky (as they were in this company) and requires the interviewer to give a crafty response based on the context question has been asked in.

Sector: IT.

Name: Pranjal Priyadarshi(2017H1120242P)

Company: Mathworks

Profile: Engineering development group

Recruitment Procedure

Round 1: Test on hackerrank three sections one section of maths two for programming languages to be chosen from C/C++/Java, two programming questions and one optional section for python.
To clear this round make sure you mark all the MCQ's correctly and also do both the programming questions(at least attempt both of them irrespective of all the testcases pass or not).

Round 2: Technical round : to clear this round be through with at least two programming language among C/C++/Java, along with it do read about system design, design patterns,and data structure questions pretty much anything can be asked.

Round 3: Managerial round:

Both included almost similar lines of questions. Also, it went more like a discussion round rather than an interview, so be confident what you answer and have a scenario from your past experience for whatever you say.

Tell me a situation when you did multitasking?
How would your guide evaluate you?
How would you evaluate your guide?
How would you rate yourself in your previous technical interview?
How would you handle an upset project partner?
How would you handle conflict in your team?
Explain me about the profile you are going to apply?
What do you understand about the profile?
What initiative you have taken without being asked and it didn't go well?
What initiative you have taken without being asked and it ended successfully?
How did you convince your manager for any initiative you took?
What all challenges, did you face?
Tell something positive and negative about your previous organization?
Why MathWorks?
What is Mathworks for you?
Describe profile?
How did you prepare for your interview?
Are you giving any other interview today?
For how many companies you have been interviewed?
What was the name of previous interviewer? (Always remember this)
Why did you leave your job?
Why your college has two different branches, Software Systems and Computer Science?
How do you think you are ahead of another branch?

Round 4: HR

It was similar to previous round and questions on the same lines were asked.Prepare standard HR questions.

Sources of Preparation

Geeksforgeeks,Interviewbit,Leetcode.

Courses and Certification

Oncampus courses thats it.

Other Relevant Information

Remember in order to crack Mathworks you should know about the role offered properly so it is very important to attend the ppt and listen each and every thing carefully.

Sector: IT

Name: Padhye Mohit Yogesh (2015A3TS0137P)

Company: KPIT, Munich

Profile: Software Developer (Electronics Profile)

Recruitment Procedure:

There were four stages involved:

- Online Test (Coding + Aptitude): This test consisted of two sections. Section A had general aptitude questions, along with a few questions from digital design, signals & systems and microprocessors. Section B was a coding test, in which elementary coding problems were asked.
- Online Test (Coding): This round had two questions of medium difficulty level. Use of STL, data structures was not allowed and the test was supposed to be done on a text editor, and compiled using Ubuntu commands. Emphasis was placed on correctness of logic and very basic test cases were evaluated.

- Technical Interview: Three different teams had come for recruitment. Based on our projects and internships, we were sent to the appropriate interviewer. My interview was taken by the Electronics team, and was mainly resume based. Questions were asked based on the projects I have done, and basic questions on power electronics were asked.
- HR Interview: Two HR interviews were taken. Typical questions like our choice of electives, strengths and weaknesses, domain preferences, willingness to stay abroad were asked.

Sources of Preparation:

For cracking the two coding tests, practice of competitive coding from Hackerrank/ Interviewbit/ similar websites is recommended. For the further rounds, be thorough with your resume and courses you have studied earlier.

Courses and Certification:

OS, OOP, NNFL and similar courses, and certifications on machine learning would prove useful.

Other Relevant Information:

The most important thing in technical interviews is your knowledge on the relevant topics, however, communication skills also play a big role when the interviewer has to decide whether he wants to hire you or not. You need to pay attention to your soft skills also, apart from your technical skills in your interview.

Sector: IT

Name: Naveen Venkat (2015A7PS0078P)

Company: KPIT, Germany

Profile: Trainee - Software Engineer

Recruitment Procedure

1. **BEFORE THE DAY OF THE INTERVIEW:** Online Tests (2 Rounds)

    a. **Coding Round:** It had two simple questions. One of the questions used integer manipulation. In the second question, a function was to be built in C that took a fixed function signature. An integer array pointer **(int*)** was the only argument. The logic of the problem was very simple, with the only challenge being to identify the number of elements in the array. It turned out that while the elements of the array were finite positive numbers, the default value with which each element was being initialized in the array was **-9999** (discovered this by printing the array for an arbitrary length), denoting empty locations wherever it existed. Lesson: Don't sit idle thinking the question is incomplete. Play with the inputs as much as possible.

    b. **MCQ Round**: This had all sorts of questions (elementary CS concepts, Electronics, Business ethics, Real Life Situations, Logical reasoning based questions etc.).

We could give these tests in any order from our hostel rooms (of course, the activity was monitored using appropriate trackers, webcam & mic).

2. **ON THE DAY OF THE INTERVIEW:**

    a. **Online test:** This was conducted in IPC and had 2 questions. The **first** one was based on the calculation of a simple metric in a small data. Later in the technical interview I was asked if I could identify this metric [point b]. The **second** question was to construct a 3x3 magic square using prime numbers (sum being less than 200). These were to be completed within 1 hour. Speed & correctness of the code was tested.

    b. **Technical Interview:** Questions were based on Deep Learning (based on my past work), and some simple logic-based problem solving. Visualization skills were highly expected (not just knowing a tool or a metric, but also having the intuition of why it is used and what it

physically represents). I was asked to interpret the metric given in the online test [point a]. As explained above it was the error (SSE) the error of an arbitrary curve from a given line (y=x). I was asked to explain Neural networks in general, Backpropagation, CNNs, LSTM, Dropout, some activation functions and feature extraction methods such as PCA. In each question, I was asked to determine the physical significance of any mathematical tool used.

c. **HR Interview 1:** This was taken by a German employee (who had come all the way down to Pilani). Some of his questions were based on "what do you know about Germany?", "what are your strengths / weaknesses?", "what did you parents say about going abroad?". Honestly, I hadn't prepared any template answers for such questions, and simply gave honest replies during the interview taking examples for my statements wherever applicable. The interviewer was a good listener and even answered a lot of my doubts at the end of the interview.

d. **HR Interview 2:** This was more focussed towards knowing my personal strengths and weaknesses. Some of the questions were, "What quality your friends would associate you with and what quality your teachers would associate you with", "Give an instance of a disagreement with your supervisor and how you resolved it", "What is your real plan?" (regarding job vs masters), etc. Here too, a lot of doubts regarding the work & life in Germany were clarified at the end of the interview.

Sources of Preparation

- **GeeksForGeeks:** In general, this site has a good collection of company-wise preparation.
- **Deep Learning Book (Ian Goodfellow, Yoshua Bengio, Aaron Courville):** This book is the Bible if your field of interest is deep learning.

Courses and Certification

Nothing specific, but some elementary tools from Statistics, Probability and Linear Algebra were used while solving problems in the technical interview.

Other Relevant Information

A general piece of advice. Be friendly with the interviewers – don't panic. In all my interviews, as I (or the interviewer) entered the room, there was a couple of seconds before we got settled. During that time, I asked about their stay in Pilani and answered any question they had about Pilani. You become quite comfortable and you screw up less when you start the interview with such small talks.

Sector: IT

Name: Twinkle Choudhary (2015A7PS0014P)

Company: JP Morgan Chase and Co.

Profile: Software Engineer

Recruitment Procedure

1. Online Test : A programming test of 100 marks having 2 programming questions; with 40 and 60 marks respectively. Questions were based on the concepts of backtracking and dynamic programming. Use of brute force solutions would lead to time-out.Platform used was Hackerrank.Time allowed for this test was 65 Minutes.

2. Technical Interview : A panel of two interviewers were interviewing candidates for this round.Questions in this round were mainly based on resume. In-depth discussion of internship projects mentioned on the resume.

3. Technical Interview : System design question using concepts of machine learning (As I had mentioned ML on my resume).

4. Technical Interview : Basic questions on DP and trees . Basics of AVL Tree.

5. HR : Common HR questions like "Tell me something about yourself","Tell me something about your family", "Why JPMC" , location preference etc.

Sources of Preparation

Interviewbit and geeksforgeeks.

Courses and Certification

DSA, DBMS, OS, Computer Networks.

Other Relevant Information

Interviewers were very jovial. The interviews were more like general conversations. One must carefully go through the details of the projects mentioned on the resume. Stay confident and answer honestly.

Sector: IT

Name: SURAJ JHA (2015A3PS0254P)

Company: JPMC

Profile: Software Engineer

Recruitment Procedure

- Online Test, Interview, HR
- Online Test had 2 problems :
    a. First problem was to solved using greedy approach
    b. Second problem was to be solved using DP.
- Test was easy.
- Interview Questions:
    a. Two technical and one hr interview round were conducted.
    b. Technical Interview

- One DP problem
- Some questions on multithreading and OOP.
- Everything else based on my projects.

c. Hr Interview was generic. **Sources of Preparation**

- InterviewBit
- Geeksforgeek

Other Relevant Information

You must know your project inside out.

Sector: IT

Name: Anuradha Bansal (2014B4A70800P)

Company: Goldman Sachs

Profile: Analyst(Risk Department)

Recruitment Procedure: Online Test, Interview

Test had 3 sections:

- Quant MCQs
- CS MCQs(Operating System, DBMS, general coding(ex:Pointers)) ● 1 coding question

For Quant, look at probability distributions (ex:exponential , poisson) and markov chain problems.

Coding question was a very basic bounded knapsack problem .

I had three technical interviews, no HR interview. A lot of puzzles were asked, do look at famous puzzles and brush up on probability and statistics. Practice a lot of puzzles and problems involving finding probability. I was asked the connecting noodles probability question in my first round. Not a lot was asked from my resume.

I was asked very basic questions on trees, dynamic programming and a few puzzles in my second round.

In the last round they asked vague questions regarding different situations involving stocks of different companies and what all I could do with the given data and what

operations I could perform on them. Basically they just wanted to build pressure and see how I perform under stress and present ideas, so be very calm.

Sources of Preparation

GeeksforGeeks, InterviewBit, Lot of standard puzzles

Courses and Certification

NA

Other Relevant Information

NA

Sector: IT

Name: Abhishek Jain (2014B2A70363P)

Company: Samsung Bangalore

Profile: Software Developer

Recruitment Procedure

Coding Test : Have to solve 1 question in 3 hours time period. Use of any external libraries like STL etc. is not allowed. Have to make any data structure needed on our own.

Technical Interview : Possible Questions :-

- Can ask to show how you solved the coding test questions
- General Algorithms based on Trees, Backtracking, linked list etc. Dynamic programming is very rarely asked.
- Generally grill over the projects and courses mentioned in the Resume.

HR Interview : Questions-

- Tell me about yourself
- Strengths and weakness
- Any plan for Higher studies
- Ranks of JEE Mains, IIT Advance and BITS

Sources of Preparation

If got an internship and sitting for the PPO then, will get some set of last year questions asked in samsung bangalore PPO test. And in coding test, will get one of those questions only, for sure.

For college placements, Make concepts of Backtracking and Tree traversal very strong. Question are mostly based on these concepts only or can be solve by boot force.

For Technical Interview : Candidate must be answerable to everything which is on the Resume

Courses and Certification

No subject as such. Interns were asked easy questions from Operating Systems, Database Management and OOP. Preparing these subjects could prove useful.

Sector: IT

Name: Arun D Prabhu (2015A7PS0046P)

Company: Samsung, Bangalore

Profile: Research

Recruitment Procedure:

Coding round: The coding round was for 3 hours. It was conducted in Samsung's proprietary software. This software does not support STL. The coding question was question 3 on this link: https://interviewbubble.com/samsunghttps://interviewbubble.com/samsung-interview-questions-asked-in-samsung-3-hour-test-set-1/interview-questions-asked-in-samsung-3-hour-test-set-1/. The problem is a markov process and it can be solved using equation: state vector(i+1)=state vector(i)* Transition matrix.

Interview round: There were 3 interview rounds- 2 technical and 1 HR. The interview rounds were short.

- Round 1: Simple questions on resume. One coding question: Rotate a given matrix by 90 degrees without extra space - https://www.geeksforgeeks.org/rotate-matrix-90-degree-without-usinghttps://www.geeksforgeeks.org/rotate-matrix-90-degree-without-using-extra-space-set-2/extra-space-set-2/

- Round 2: Questions on project and internships mentioned in resume. I had a couple of projects on machine learning and he asked me some questions on machine learning [related to the techniques used in the project]. One machine learning problem was asked: Self driving cars are not feasible in India since objects (cows, dogs) randomly appear on the road. So we have to predict whether an object might appear at a given position and then decide on the speed of the vehicle. He wanted to see my approach. The interviewer was very happy with my answer and I feel this was a turning point in my interview leading to my profile change ☺.

- Round 3: The HR round had popular HR questions such as: Why do you want to join our company? The discussion was very general.

Sources of Preparation:

- Coding: Interviewbit, geeksforgeeks. I also followed a blog which had a collection of important problems. Link: https://techiedelight.quora.com/500-Data-Structures-and-Algorithmshttps://techiedelight.quora.com/500-Data-Structures-and-Algorithms-practice-problems-and-their-solutionspractice-problems-and-their-solutions
- Interview: Slides of courses for revision, Project reports for resume prep.

Courses and Certification

NNFL, Machine learning, DSA.

Other Relevant Information

Start preparing early. Be prepared for questions on resume and general questions such as introducing yourself. Practice as much competitive coding as

possible. Go through interview experiences and PU chronicles before your interview to find out the important subjects asked in the interview.

Sector:IT

Name: Mayank Raj (2015A8PS0488P)

Company: Samsung Bangalore

Profile: Research Profile

Recruitment Procedure

- I interned at Samsung Bangalore during the summers. There are Four Stages for the Research Profile during the recruitment as well as for the interns. The CGPA Cut off for the Research Profile was 8.5 and Developer was 7.5 respectively.
- First Stage –Online Coding Round ○ Test has 1 Question which has to be solved in 3 hrs.
    - No Libraries are Allowed to be imported and all test cases have to be passed.
    - Expect Questions testing your logic and Coding proficiency rather than language/Function dependency.
    - Dynamic Programming ,Backtracking ,Graphs can be focused for this Round.
- Technical Round 1 :

  This round started off with discussion about my Previous projects .Then he asked me about my current project there which was Deep Learning related .He gradually began asking core CS Courses like OOP,OS,DSA. He asked in depth and tricky questions related to these questions .In the end he noticed that I was not from CS Department ,then he asked me a few basic questions on Core Electronics like Control Systems, Digital Design. He was quite impressed as I had not done courses in Deep Learning/ML

as well as Data Structure and Algorithms as part of my coursework and complemented me .

- Technical Round 2 (Research) :

  This round started with questions related to Data Structure like Tries, Hash-map and then moved on to searching algorithms and Questions on graphs.

  Then he asked me scheduling and disk management related questions .He then asked me about my work there and started asking deep questions related to CNN ,Computer Vision, NLP. He asked me to explain each and every part in details and the decisions that I took and why. He gave some research problems and was mostly focusing on my reasoning and logic that I accompanied my solution with .He then asked me questions related to my other projects that I had done in college.

  The interview lasted more than an hour ,and in the end he asked me some problems related to current Camera Tech (which he was explaining in brief)and then he was posing some questions related to it .

- HR Round

  She started off by asking my experience at Samsung Bangalore ,things I liked there and areas which needed improvement .She then asked me about my POR's and hobbies .She seemed interested in music ,which was mentioned in my Resume .It ended with college life, sports facilities and some generic HR questions.

Sources of Preparation

DSA –Hackerrank ,Hackerearth

Geeks for Geeks archive and IB in end

Deep Learning articles on Internet and papers.

Courses and Certification

OOP,OS,DSA as a course not required but knowledge is a must, same goes with Deep Learning if you mentioning in Resume.

EEE/ENI people cannot be oblivious to their core courses as interviewers are highly experienced people ,and have knowledge of various domains .

Other Relevant Information

In depth knowledge of both projects and courses is required. For Research profile, thinking/learning ability was tested the most in my case along with DSA and ML/Deep Learning. Internships in reputed companies/Research organizations creates a positive impression. Work is not development related and focused on current technologies impacting the world and ,making it more interesting to work upon.

Sector: IT

Name: Vanchanagiri Rahul (2015A7PS0101P)

Company: Samsung Bangalore

Profile: Software Developer

Recruitment Procedure

- Online coding test, 2 technical rounds, 1 HR
- The test was conducted on their own platform.
    - Questions: 1, Duration: 3 hr
    - The question was a very simple graph based problem ● Technical interview:
    - Round 1 was mostly based on my resume – internships and academic projects along with a few theory questions in DSA and OOP.

- The questions were based on basic concepts like inheritance, static variables etc. Gave a graph problem related to shortest path and asked which would be more suitable here – DFS or BFS?
- Round 2 was easy. A single coding question, Max sum subarray problem based on DP was asked. He asked me to write the code on paper in any language.

- HR interview:
  - It will be easy if you are well prepared for typical interview questions like Why Samsung, why should we hire you etc.
  - Speak confidently and don't show any sort of confusion.

Sources of Preparation

- https://practice.geeksforgeeks.org/courses/SudoPlacement/
- geeksforgeeks, interviewbit
- Lecture slides

Courses and Certification

DSA, OOP, DBS, OS

Other Relevant Information

- The interviewer was keen on everything written on the resume. Try to explain all your projects clearly and do not mention anything you are not confident of.
- If you have interviews of multiple companies on the same day, don't assume anything like selection or rejection just based on words or tone of the interviewer and let it influence your other interviews.

Sector: IT

Name: Dalia Sagar Ashok (2015A8PS0299P)

Company: Samsung Research and Development Institute, Bangalore

Profile: Researcher

Recruitment Procedure

PPO through internship, SRIB conducts its own interview process, during the internship.

- **Coding Round:** 3hrs, 1 question. You need to pass all 50 test cases in the given time-limit. Permitted languages: C, C++, Java. They have their own Software for conducting the tests. You can use Visual Studio for coding in C, C++ or Eclipse for Java. Questions are mostly from the practice questions provided there and are mostly related to Backtracking, BFS, DFS, DP. Sometimes even Brute force approaches might work. You are given 2 attempts in the gap of around 2 weeks.
- **Technical Interview 1:** This interview is common for both developer and research profile. Questions can be related to the subjects on your resume(OOP, OS, DBMS, CN, etc.), DSA, previous projects and internships, current project in Samsung, sometimes they might ask puzzles too.
- **HR Interview:** General HR questions about strengths, weaknesses, “Why Samsung?” , “If given an option between Google and Samsung, what would you choose?”, “Anything you would want to change in Samsung?”
- **Technical Interview 2:** This was only for the research profile. People with CG 8.5+ and who had done well in the previous rounds were selected for this interview, mentor feedback was also considered for the selection. This was primarily based on your resume. They specifically look for ML, deep learning related projects in the resume. They might also ask about a few concepts related to ML, and might also discuss the ongoing project at Samsung. For me, the interviewer asked questions related to my SOP, which was on Viola Jones algorithm and the project I had done in Information Retrieval course, and my on-going project in Samsung. Both had applications for ML concepts.

Sources of Preparation

- GeeksforGeeks for primary coding knowledge and interview preparation.
- There are a few practice question folders in Samsung and experience says that all the question come from these folders. Practice all these folders

Courses and Certification

I had done OOP, OS, NNFL, IR, SOP on Viola Jones Algorithm

Other Relevant Information

Research division in Samsung is primarily focused on ML and Deep Learning.

Sector: IT.

Name: Prabhaker Saxena (2017H1030134P)

Company: DELL

Profile: Network Development Engineer 2

Recruitment Procedure:

1)Online Test: Online test consist of questions which were from OS,DBMS,CN,CSO,C,C++

2)Technical Round-1: In this round, they asked two coding questions based on hash table but they asked to code in c only and some computer networks related questions as well

3)Technical Round-2: In this round, they asked me about my projects and tried to find flaws in my project and then they were asking some more questions from computer network.

4)HR- In this round, they were asking questions to test my confidence and also to test my decision making by giving me various scenarios and trying to understand my response.

Sources of Preparation:

As a first step, complete Must Do Coding questions from Geeks for Geeks. They'll serve to give adequate exposure to the type of problems you can expect in your technical coding rounds. Especially focus on Dynamic Programming & Arrays. Revise your GATE notes for completeness of preparation. Subjects to target include OS, DBMS, Algorithms, DS, & CN. If you're a beginner, you can start solving practice questions on Geeks for Geeks with the difficulty level as Easy & Medium. Once you're comfortable with that, you should focus on solving the Must Do Coding questions followed by the ones from InterviewBit.

Other Relevant Information:

Be very confident while giving answers and also prepare your project and gate syllabus very well as most of the questions will be from that.

Sector: IT

Name: Shivankit Gaind (2015A7PS0076P)

Company: D.E. Shaw

Profile: Software Developer

Recruitment Procedure ●

Online Test:

- The test had three sections – Coding, Technical and Aptitude. It was hosted on HackerRank.
- Coding round had 2 questions. The first question was on Binary Tree Traversal (where the tree is stored in the form of an array) and second was based on Dynamic Programming (a variation of Knapsack problem).
- Technical round had 10 questions. It was based on data structures, operating systems, database systems, object oriented programming and computer networks.
- Aptitude round had 10 questions. These were basic mathematics questions and some information based puzzles.
- Around 15-17 students were shortlisted after this round. ● **Technical Round – 1**:

- After having a look at my resume, the interviewer asked me to describe the project I did during my internship. After that, I was asked to explain everything about my Compiler Project (including the stages of development of a compiler and all the data structures used).

- This was followed by a Design question – How would you implement the "History" feature in Google Chrome? I was expected to come up with the possible use cases, efficient data structures to implement the functionalities (like a linked list based queue for storing urls, a trie for implementing search from history etc.) and then merge them into a single application. The interviewer gave hints whenever I got stuck.

- After this, he asked me certain questions about OS, mainly revolving around Semaphores and Dining Philosophers Problem. I wasn't asked to code anything throughout the round. ● **Technical Round – 2:**

- The round started with a detailed discussion about my Parallel Computing project – "Parallel Inverted Index". Then the interviewer asked me about my strongest programming language (Java in my case) and asked a lot of questions about the internal implementations of the language including whether it's compiled or interpreted, JVM byte code interpreter, static functions, scopes, packages, inheritance, interfaces, abstract classes etc. It is strongly advised to know atleast one language thoroughly (preferably C++ or Java). Studying about "Principles of Programming Languages" may also help.
- This was followed by questions from Database Systems including primary key, candidate keys, super keys, 1NF, 2NF, 3NF, Multi-valued Dependencies, as well as indexing techniques including Hashing and B-Trees. Always prepare Database Systems thoroughly for DE Shaw interview, since they ask a lot of questions from this subject for almost every candidate. (Don't remember SQL, just have an idea of what all types of queries are there). Preparing Design Patterns from OOP is also recommended. ● **HR Round:**

- He asked me to describe myself. This went for about 15 minutes. Then he asked me how my experience with Liv.AI was (where I did my summer internship). He further asked me to tell him about the project I found most interesting during my college life and what were the challenges I faced while working on it, but explain it in common man's language (without going into its technicalities). Then, he asked me why I would want to join DE Shaw. After all this, he explained me about the work culture at DE Shaw and what would be expected from me if they hire me for this role.

Sources of Preparation

- Interviewbit (Highly recommended – covers most of the important concepts and techniques required for coding tests and interviews)
- Company wise practice questions from GeeksforGeeks
- OOP, DBMS, OS, Computer Networks from Slides

Courses and Certification

These courses are must to know for DE Shaw interviews (first three being most important):

- Data Structures and Algorithms
- Database Systems
- Operating Systems
- Object Oriented Programming
- Computer Networks

Other Relevant Information

- Revise your resume thoroughly. Don't write projects on the resume which you can't explain properly.
- Prepare Dynamic programming and Graphs well, since most of the questions in the coding tests revolve around them.
- Don't worry if you are not into competitive programming, you can still clear the interviews with focused preparation.
- Read about few design questions before the interviews if time permits. That'll give you a basic idea of how to approach a new problem.
- Read about the company a little bit/attend its ppt before going for its interview.

Sector: IT

Name: Aradhya Khandelwal (2015A7PS0036P)

Company: DE Shaw

Profile: Member of Technical Staff

Recruitment Procedure

1) Online test with 3 sections: Programming, Technical & Aptitude. Each section had its own time limit, with leftover time carrying over. The programming section had 2 questions; the first one was a variation on array representation of heaps, and the second one was a DP question. Technical section had questions

on OOP, OS, and SQL primarily. I would suggest saving time on the technical section for the aptitude section, which was pretty standard but time consuming.

2) Around 15 people were shortlisted for the interviews, of which I had 4 rounds. They were very conceptual, with no coding questions. They focused a lot on OOP, OS and DBMS. A few system design questions were asked too. They also asked programming language based questions, like the differences between Python and C++, list comprehension in Python etc.

3) Be thorough with whatever you answer, and try to engage in a conversation with the interviewers. Read up on the company as well before your interviews.

Sources of Preparation

- Do try to finish all of Interviewbit before placements. It's the most comprehensive source of commonly asked questions, and doing it completely would be enough for most companies.
- Geeksforgeeks and Cracking the Coding Interview for commonly asked interview questions and past experiences. G4G is also really good for CS theory.
- BITS Pilani course slides for OS, OOP and DSA.
- IITD NPTEL DSA videos on YouTube are a great source of DSA prep as well. **Courses and Certification**

CS CDCs and DELs like ML and IR. They also mentioned the Finance Electives on my résumé, but I don't know how significant they were.

Other Relevant Information

Prepare your résumé carefully, and be very thorough with it. You should be able to describe every line on your résumé in depth.

Sector: IT

Name: Riya Sharan (2017H1120237P)

Company: Deutsche Bank

Profile: Graduate Analyst - Technology

Recruitment Procedure Online

Test :

- Conducted in HackerRank. ● Consisted of two portions:
- Coding Problems (2) – based on Dynamic Programming.

  Ques 1: String of 0 and 1 is given. 0 is for 'rose' and 1 for 'cosmos' flower. Two types of bouquets can be formed either rose bouquet or rose-cosmos bouquet. If three consecutive zeros then rose bouquet can be formed. To form 'rose-cosmos' bouquet alternate 0 and 1 are required. Profit is associated with each type of bouquet and we need to maximize the profit.

- Ques 2: Three types of discount schemes have been proposed and three types products were given. Have to apply any of the scheme with one product only and every product have to be associated with one scheme. In such scenarios we need to maximize the profit for shopkeeper.
- Technical MCQs based on C, Data Structures and Algorithms (No negative marking).

Interview Process:

- Round 1 (Technical): This round lasted for about 40-50 minutes.
  - Two coding questions were asked.

  1. There are n stairs, a person standing at the bottom wants to reach the top. The person can climb either 1 stair or 2 stairs at a time. Count the number of ways, the person can reach the top (order does matter).
  2. Given a positive integer N, count all possible distinct binary strings of length N such that there are no consecutive 1's.

  - Explain your code with multiple test cases and scenarios. Try to provide optimized solutions.
  - Tell me about the courses done in BITS, Pilani.

- Some questions related to DBMS on Transactions and SQL.

- Round 2 (Technical):

- This round also lasted for about 40-50 minutes. Questions were mainly asked on projects.
- Here, knowledge of your projects is very important as you have to explain your projects in detail. Whatever questions they ask on projects based on different scenarios need to be answered using algorithms used, block diagrams and so on.
- The interviewer scanned my resume and asked me to explain my cloud computing project, he gave different scenarios and asked how would my project handle them and also about the most challenging part of the project and how you come up with the solution.
- Few questions were asked on cloud computing like Hadoop, Map Reduce framework, CAP theorem and its implications, Infrastructure as a Service and Platform as a Service cloud model, etc.

  At last two puzzles were asked:

  1. Swap two numbers without using third variable.

  2. Egg dropping puzzle: Suppose you have N eggs and you want to determine from which floor in a K-floor building you can drop an egg such that it doesn't break. You have to determine the minimum number of attempts you need in order find the critical floor in the worst case while using the best strategy.

     A slight variation of binary search helped me to solve the puzzle.

- Round 3 (Technical + HR):

  This round lasted for about 20-25 minutes.

  In this round also questions were asked on projects based on different scenarios and some HR questions:

  1. Introduce yourself.

  2. Why did you decide to go for higher education?

3. Why Deutsche Bank?
4. Most challenging situation faced in your life.

Interviewer also gave me the opportunity to ask some questions about the company and profile they were offering.

- Round 4 (HR):

This round lasted for about 10 minutes.

1. What is your biggest strength?
2. How do you handle failures?
3. One thing which always keeps you motivated.
4. What do you know about Deutsche Bank? **Sources of Preparation**

1. Geeks for Geeks and Narasimha Karumanchi for Data Structure and Algorithm.
2. Coding : Interview Bit and HackerRank.
3. Database, OS, CN and SQL (Geeks for Geeks), C, C++ (Geeks for Geeks).
4. Revise your subjects and projects that you have mentioned in your resume. **Courses and Certification**

1. Cloud Computing
2. Data Mining
3. Software for Embedded Systems
4. Information Retrieval

Other Relevant Information

1. Don’t practice programming on multiple platforms, choose one that gives you good test cases and also has time complexity criteria to judge the coding.
2. Prioritize your best projects in the resume and be thorough with it.

Sector: IT

Name: Sonali Sharma (2017H1120239P)

Company: Deutsche Bank

Profile: Graduate Analyst-Technology

Recruitment Procedure

Online test, Technical , HR

Test had 2 sections(2 coding questions and 5 multiple choice questions)

Coding section: in which 2 coding questions were asked

- **First question was on DP :** String of 0 and 1 is given . 0 is for ‘rose’ flower and 1 for ‘cosmos’ flower. Two types of bouquet can be formed using these flowers.’ Rose’ flower bouquet and ‘Rose-Cosmos’ flower bouquet. If there is ‘three consecutive zeros’ then rose bouquet can be formed. To form bouquet which contains rose and cosmos flower both we need string which contains alternate 0 and 1. Profit is also associated with each type of bouquet . We have to maximize the profit.
- **Second Question was also on DP:** Three types of discount schemes have been proposed and three types were given . have to apply any of the scheme with one product only . and every product has to be associated with one scheme .In such scenarios maximize the profit for shopkeeper.

Basically do not leave any topic while practicing coding questions . Cover classical Problem from each and every Data Structure and Algorithm Paradigm. ● Multiple Choice Questions were on C, Data Structure and Algorithms. Interviews: There were 4 rounds (3 Technical + 1 HR)

Technical Rounds:

First round: was paper pen coding round .It lasted for 40-50 minutes.

- First Question: Given a number and 'n' (where n is no of digits) represent number as a sum of n digits , and there can only be trailing zeros while splitting number as sum of n digits.For example : 5 can be represented as (1,4) , (2,3) , (3,2)

,(4,1),(5,0) .please note here that (0,5) can not be the answer as mentioned in the question that only trailing zeros are allowed.

- Second Question: It was DP questions . So, I would suggest that be thorough with classical questions of DP.Questions was based on LCS(Longest Common Subsequence) concept . Interviewer tweaked question a bit.Same question can be solved using Kadane's Algorithm (DP solution).

Given **n** boxes containing some chocolates arranged in a row. There are **k** number of students. The problem is to distribute maximum number of chocolates equally among **k** students by selecting a consecutive sequence of boxes from the given lot. Consider the boxes are arranged in a row with numbers from 1 to n from left to right. We have to select a group of boxes which are in consecutive order that could provide maximum number of chocolates equally to all the **k** students. An array **arr[]**is given representing the row arrangement of the boxes and arr[i] represents number of chocolates in that box at position 'i'.

https://www.geeksforgeeks.org/maximum-number-chocolates-distributedhttps://www.geeksforgeeks.org/maximum-number-chocolates-distributed-equally-among-k-students/equally-among-k-students/

After this question Interviewer said to me that he is proceeding me in the second round.

Second Round: It lasted for 50 minutes approximately. I was called twice in second round. No need to panic if this happens to you . It means Interviewer wants to check your depth of subject knowledge.

- First Question was to Optimize Egg dropping puzzle problem . Interviewer more interested in approach ,so try to think in all possible direction. Question was to optimize the number of iterations in which you can tell the

minimum number of stair from which on dropping an egg , egg will not break.

- Second Question: He told me to write Query to retrieve the tuple of second highest scorer form student database table. Please pay attention here he asked to retrieve the whole tuple not only just one field .(we generally have solved question which asks for name of second highest salary employee, not all information about that employee).
- Third Question:He asked to tell which subject I like the most and topics from your favourite subjects so I mentioned some of My B.Tech subjects (OS,CN,DBMS) and topics from these subjects then he asked questions from scheduling algorithms , Virtual memory, Subnetting , Supernetting , Primary Key , Referential Integrity Constraint.

Third Round(Technical +HR) : was on basically was on project . Interviewer asked me to explain my internship project .Then he asked some scenario based questions which were related to my projects. Then he asked one DBMS query question that was on natural join basically you have to identify on which field you will take natural join when more than one fields are common in two tables.

- In third round I was asked some HR questions also like:
- Which is best day of your life till now which you like to remember everyday?
- Which is the worst day of your life which you not like to remember at all?
- Why should I hire you ?
- Your biggest strength.

HR round:

She wrapped up this round soon .It lasted for 10 minutes .

She also asked :why should we hire you ?

- What are your hobbies?
- Do you already know someone from Deutsche Bank?
- Tell me in one word how your friends see yourself?

Then she told me to ask questions.

Sources of Preparation

- Practice coding questions on Hacker Rank (To familiarize with coding platform)almost all companies conduct their coding rounds on Hacker Rank.
- Practice coding questions from Geeks for Geeks , Interview Bit , Hacker Rank. Do not go for CodeChef , SPOJ kind sites, because companies tests your basic knowledge . So be thorough with basic coding questions and different way to solve these questions rather solving questions from highly competitive coding sites.
- Revise Operating system , DBMS , Computer Networks form Geeks for Geeks archive.

Courses and Certification

As such I did not do any courses and certification other than academic courses.

Other Relevant Information

- Please mention those subjects and language(for coding) in which you are confident and can handle questions .
- Be thorough whatever you write on your resume. I was asked each and everything which I had mentioned on my resume.

Sector: IT

Name: Kanika Rathore (2017H1030135P)

Company: Deutsche Bank

Profile: Graduate Analyst - Technology

Recruitment Procedure Online

Test :

Test was conducted on HackerRank. Total 7 questions were there. First 5 were MCQs based on C, Data Structures and Algorithms (No negative marking). Last 2 were

coding questions based on DP. Coding questions were pretty tough. I was able to pass few test cases in both questions. As coding questions were very difficult, I believe MCQs played major role in deciding the shortlist.

Ques 1: String of 0 and 1 is given. 0 is for 'rose' and 1 for 'cosmos' flower. Two types of bouquets can be formed either rose bouquet or rose-cosmos bouquet. If three consecutive zeros then rose bouquet can be formed. To form 'rose-cosmos' bouquet alternate 0 and 1 are required. Profit is associated with each type of bouquet and we need to maximize the profit.

Ques 2: Three types of discount schemes have been proposed and three types products were given. Have to apply any of the scheme with one product only and every product have to be associated with one scheme. In such scenarios we need to maximize the profit for shopkeeper.

Interview Process:

- Round 1 (Technical): This round lasted for about 40-50 minutes. As I had mentioned SQL, Oracle in my resume, interviewer asked me if I am comfortable with that and then he asked me to write 3-4 bit complex queries and few questions like what is dual table, how many columns does it have and some questions from Database. He was pretty satisfied with the answers I gave. Then he asked me to write code for program which was as - you have an array of numbers in which every element is appearing 2 times except 2 elements. I was been asked to provide optimal solution for that. I gave solution with binary search approach.

- Round 2 (Technical):

  This round also lasted for about 40-50 minutes. Interviewer asked me questions from different subjects mentioned in my resume. Then he asked me to write code to delete a file. In code I checked different cases and also the exceptions which could be raised. While explaining code he asked me few file handling and exception related questions. He also asked me about the projects I did but didn't ask deeply about the projects.

- Round 3 (HR):

  This round lasted for about 20 minutes. Interviewer said that it is going be like a rapid fire in which I have to answer quickly. First question was whether I attended the PPT or not and I didn't attend the PPT so told him, he was ok with that. Then he started with questions. Questions were HR based and mainly situation based. Also he asked me question in German as I had mentioned German in my resume. This round was basically to test your personality.

- Round 4 (HR):

  This round lasted for about 20 minutes. This round was similar to the previous HR round. In this interviewer asked same question in different ways. About my strengths, one adjective that my friends would use to describe me, my positive points, negative points etc.

Sources of Preparation

1. Geeks for Geeks for Aptitude and theory concepts of different subjects.
2. Coding : Interview Bit.
3. Prepare for projects thoroughly and everything you have mentioned in your resume.

Courses and Certification

1. Machine Learning
2. Advanced Data Mining
3. Advanced Operating System

Other Relevant Information

1. If you are not confident with something, better not write it in your resume. Whatever you mention in resume, prepare it well.

Sector: IT

Name: Parul Sharma (2017H1120252P)

Company: Deutsche Bank

Profile: Graduate Analyst

Recruitment Procedure

1. Online Test:

   Test had two parts:

   (a) 5 C MCQ's

   (b) 2 coding questions on dynamic programming.

   The questions required a good knowledge of all the concepts and could be categorized into medium-hard level.

2. Technical Round 1:

   The interviewer was one of the Technical managers of the company. It gave an advantage to tell that you are proficient and can write in multiple languages. All the follow up questions were based on the resume.

   (a) The first question was:

   Count of n digit numbers whose sum of digits equals to given sum.

   Given two integers 'n' and 'sum', find count of all n digit numbers with sum of digits as 'sum'. Leading 0's is not counted as digits.

   (b) The second question was on dynamic programming: Count ways to reach the nth stair

   There are n stairs, a person standing at the bottom wants to reach the top. The person can climb either 1 stair or 2 stairs at a time. Count the number of ways, the person can reach the top.

   (c) Database query:

   Given a balance amount summary table, print the balance amount given any date.

   (d) Other HR type questions were asked

3. Technical Round 2:

   The questions were on software architectural patterns, egg dropping puzzle, object-oriented design principles and project work.

4. HR/Technical Round 3:

   Project based questions and other Typical HR-questions:

   (a) Why did you leave your previous company?

   (b) Where do you see yourself in 5 years etc.

5. HR Round 4:

   (a) How did you handle free riders in a project?

   (b) Describe yourself in one word

   (c) How do you manage politics?

   (d) Why do you want to join Deutsche Bank?

   (e) Why did you leave your previous company? And etc

The idea was that you were honest, confident but humble in your answers. No need to say high-ended answers. Genuine answers will do just fine.

Sources of Preparation

Geeksforgeeks is sufficient for all the coding question practice and for revising all the basic concepts.

Courses and Certification

No Subjects as such. However, learning software architecture and object-oriented principles and techniques for designing proved to be useful. **Other Relevant Information**

Being honest and humble gives a good impression in any interview besides thorough knowledge of the concepts.

Have a good understanding of how the company function and operates which shows a genuine interest in the company.

Sector: IT

Name: Jai Agarwal (2014B4A70428P)

Company: Cohesity

Profile: Member Technical Staff (MTS)

Recruitment Procedure:

- Online Test with a CG cutoff of 8.0 followed by 2-3 interviews.
- Online Test had 2 questions. Level of questions were medium if you have practice:
  - Given a n*n chessboard and an initial position (x,y) of the king, find the probability that the king will be on the board after k steps.
  - Given a string, find the *k*th largest letter (according to the ASCII). If none found, return -1. Note: In this, we need to handle duplicates.
- I had 2 rounds of interviews. All the questions were really interesting. Interviewers were helpful if you get stuck.
- In the first round, I was a given a question on cyclic linked list. Given a linked list with cycle, find the distance from head node where the fast and the slow pointer will meet in terms of *m* and *n* only. m is the number of nodes outside the cycle, and n is number of nodes inside the cycle. Note: the fast pointer is incremented by 2. Answer: m+(n%m)
- The second round was based on resume, and I was also given a series of system design questions. Questions on resume were smart and to the point. For the system design question, the problem was to design a counter for a website which tracks only the last 1 minute hits. Progressively in the questions, the scalability issues were increased. The final question was to design the similar counter for a website which can get billion hits per second.

Sources of Preparation

No specific source of preparation for Cohesity. GeeksforGeeks practice and knowledge of CS courses like OS and Database Systems are enough.

Courses and Certification

No certification. CS CDCs are important though.

Other Relevant Information

Be clear about your resume points. Don't exaggerated on your skill set. Interviewers were smart and helpful if you get stuck. Also, have a good grasp on the basic concepts of Data Structures.

Sector: IT

Name: Anany Mishra (2015A7PS0064P)

Company: UBS

Profile: Software Engineer

Recruitment Procedure

- Online Test, Interview
- Test was conducted on Hackerrank. It had 2 sections:
    a. 2 moderately difficult coding questions.
    b. 10 basic Computer Science mcqs.
- This was followed by a personality test on a separate platform
- Those who cleared the technical test were called for interviews at PU. There were 2 technical rounds followed by a HR round:
    a. Round 1(Technical): Basic Computer Science theory questions with a focus on Object Oriented Programming, 2 code on paper questions (dynamic programming).
    b. Round 2(Technical): Thorough resume and projects discussion, system design problems.
    c. Round 3(HR): Basic personality questions with references to the personality test, discussion about role and offer.

Sources of Preparation

Geeks for Geeks, Interviewbit, Hackerrank.

Other Relevant Information

Approach for solving problems is more important than the actual solution in the interview.

Sector: IT

Name: Anand Chordiya (2015A7PS0118P)

Company: UBS

Profile: Business Analyst + developer

Recruitment Procedure

Written test: two tests

Test 1 : Analyst

MCQ type 25 questions. Basic finance and aptitude questions.

Test 2:Software Developer

Hosted on hackerrank with medium level coding questions covering DP and array manipulation.

Interviews : 3 rounds Round

1: Analyst

questions on valuation of a company, IPO , balance sheet entry , Stock trading (basic concepts), forward and future definitions.

Round 2:CS (technical)

Basic C programming concepts, recent trends in CS which might affect banking

(Blockchain), basics of blockchain, your favourite CS subject and further questions on that, current project you have been working on.

Round 3: HR

Why analyst, role model, interests, consider your corporate/office team as a cricket team which role do you think you fit in (eg: opening batsman , Bowler, Wicket keeper, all rounder, etc) and explain why.

Sources of Preparation

GFG, slides of DSA ,DBMS , OOP ,OS.

Courses and Certification

Finance minor (compulsory) , electives in finance like DRM ,BAV, FRAM were very helpful.

Other Relevant Information

Do attend the PPT you will have to justify why UBS the answer should be relatable to the PPT

Sector: IT

Name: Chhayank Kumar (2014B5A70852P)

Company: UBS

Profile: Software Engineer

Recruitment Procedure

- Hackerrank Online Test: 2 coding questions and 10 mcqs

- Those who cleared the online test were called for interviews at PU.In total, there were 2 technical rounds followed by a HR round.

- Technical Round 1: Computer Science theory questions based mostly on OS and OOP,1 dynamic programming question.

- Technical Round 2: Resume and project discussion followed by a discussion on system design problem.

- HR Round: Basic personality based questions,discussion about company and job profile.

Sources of Preparation

Geeksforgeeks and Interviewbit

Other Relevant Information

Communication skills matter and mostly they try to see your approach even if you are not able to solve the problem.

Sector: IT

Name:Aditya Chauhan (2014B1A70408P)

Company: Wipro

Profile: Project Engineer

Recruitment Procedure

Online Test followed by Technical and HR.

Online Test had two section: first section was based on graph-based question, their aim was to test your data analytics skills. This section had around 20 questions. Second section was coding, there were two question one was easy(parenthesis matching) other was medium- tough(Dynamic Programming) ,you have to solve both the question(or one and half) to qualify for next round.

5 Students out of 22 were shortlisted after coding Test.

Interview was easy, asked mostly about projects. They were mostly interested in Java. You should be very confident on your resume, do not mention anything which you don't know.

HR had usual questions, about yourself and your career goals etc(Prepare for HR questions beforehand).

Finally, 4 students were selected.

Sources of Preparation

Interview bit and Geeks for Geeks

Revise Operating Systems(Scheduling,caching,Process Synchronization(semaphores,mutex)), Database systems(Basic SQL, Normal Forms(1NF,2NF,3NF and BCNF),File System and Indexing)

Sector: IT

Name: Garv Sharma (2015A8PS0336P)

Company: Wipro

Profile: Project Engineer

Recruitment Procedure

2-3 rounds: Online Test, Personal Interview (Technical + HR)

- Online Test: There was an online test for about 70 minutes: 40 mins aptitude and 30 mins coding. It is important to maintain speed in the aptitude section. The coding section contained 2 questions: one was on arrays, other was a backtracking problem (mouse and cheese in a grid). It is essential to cover the corner cases because the final shortlisting depends on how many test cases you passed. This was followed by a 20-minute writing-section where

you had to write a 100-400 words paragraph on a general topic (e.g.: Leadership) to test your writing and communication skills. 5 students were shortlisted out of 40-45 students.

- The Personal Interview was a brief walk-through of the resume, lasting not more than 15-20 minutes (do not expect the same). The questions were aimed at getting a basic idea of your projects and a few follow up questions about the related field and your internships.

Other Relevant Information

- Must cover corner cases in the coding problems.
- Be absolutely prepared and confident about your projects. If you do not know the answer of a question, it is okay to tell the interviewer that you have not studied that.
- It is important to get a good idea of the work profile from the Pre-Placement Talk and clear up any doubts you may have after the interview.

Sector: IT

Name: Amit Shukla(2015A3PS0238P)

Company: Wipro

Profile: Project Engineer

Recruitment Procedure :-

It consisted of three rounds:

1)Coding Round held in IPC , it had several sections containing verbal and grammar skills , logical and quantitative aptitude. Last section was based on competitive coding in which two questions of easy and moderate levels were asked.

2).Technical cum HR Round :- Interviewer was friendly. Questions revolved around the projects which i had done and about my resume. 3).HR Round :- This was also a friendly and interactive round, he asked some popular HR questions. **Sources of Preparation :-**

Mainly GeeksforGeeks for concept and theory. Practiced from sites such as Hackerrank , leetcode etc.

Courses and Certification :-

Did a course in OOP and OS , prepares DSA from my own.

Other Relevant Information:-

Sound knowledge of DSA , OOP, OS is must. Be prepared with your resume thoroughly.Keep Calm

Sector: IT

Name: T Dinesh Ram Kumar (2014A3A70302P)

Company: Uber

Profile: Software Engineer (International)

Recruitment Procedure

1. Online Test: 3 coding questions on hackerrank, binary search, graph, dynamic programming
2. Interviews: 3 rounds of interviews

    1. Design Problem: modularity, readability and reusability.
    2. Algorithms and Complexity
    3. Internships and Projects

Sources of Preparation

Basic Algorithms and Programming. Reasonable understanding of major core courses.

Courses and Certification

Electives and Course Projects.

Other Relevant Information

Summer Internship experience and Confidence

Sector: IT

Name: Ananyashree Garg (2015A7PS0117P)

Company: Uber India

Profile: Software Engineer

Recruitment Procedure

- Online Test, Technical interview, HR interview
- Online Test had 3 coding questions. 1 was on the binary search, 2nd was on graphs and 3rd was on DP.
- We were asked to carry our laptops for the interview.
- All three rounds of interview were technical interviews. Last round was a mix of HR and technical.
- In the 1st interview, they asked me to code the minesweeper game on the laptop and later I had to mail that code to them.
- 2nd interview round was also coding round but on paper. I was asked time complexity for every coding question I did.
- In the 3rd round, they asked me to design class for the calculator. This round had little of HR also. He asked me about my previous projects, internships, problems I faced in them and how I tackled them, my favorite subject, algorithms which I liked the most and why.

Sources of Preparation

Practice questions from interviewBit and GeeksforGeeks. Focus more on graphs and DP.

Courses and Certification

One should have a strong command over Data Structures and Algorithms.

Other Relevant Information

During the technical interviews, along with focusing on the correctness of the code, they also focus on how you approach the question. They look at your thinking and your ability to write clean, well-indented code. Writing comments can be a plus point. Keep telling them why you are writing any line, what you are writing etc. Don't forget to address the corner and boundary cases in your code. One should have a strong command over time complexity concept.

Sector:IT

Name: Juluri Aravind (2015A7PS0031P)

Company: Uber India

Profile: Software Engineer

Recruitment Procedure:

Online Coding Round, Technical Interview(3 rounds)

Online Coding Round had 3 questions which should be solved in 1.5 hrs

1. Binary Search Problem.
2. Based on Cycles in Directed Graph.
3. Given a final result in two player game, we should find number of ways the game can end with that final result.

In the First Round of Technical Interview , I was asked to write pseudo code for Queue Management System in Shopping Malls, which is of one hour . In the Second Round , I was asked to find an effective algorithm for a graphs question, discussed its complexities.

In the Third Round , I was asked questions on my past Internships, questions on java, data structures and a few HR questions .

Sources of Preparation:

- Coding: Interview Bit, Hacker Rank.
- Java and Data Structures Concepts: Geeks for Geeks, Tutorials point.

Courses and Certification

Competitive Coding, Java, Data Structures, Computer Networks.

Sector: IT

Name: Madhu Kiran (2015A7PS0111P)

Company: Uber India

Profile: Software Engineer 1

Recruitment Procedure

- Online coding round, 3 Technical Interviews.
- Coding test was conducted on Hackerrank. It had three questions (1.5hr).
    1. Variant of Binary search problem.
    2. Related to Graphs
    3. DP question on two player game (Counting number of ways to win).
- **Interview 1**

  This round was taken on hackerrank's scratch pad (where interviewer can monitor your code in real time). Asked to implement a game in steps (System design). Modularization of code given priority. It was of 1hr.
- **Interview 2**

  A question on graphs was asked(traversal based solution). This round is more of a discussion. Interview was focused on how complexity of solution can be improvised. It was of 1.5hr.

- **Interview 3** ○ Questions on operating systems, computer networks, OOP, cryptography. He asked follow up questions for my answers.
    - I was asked to explain few of my projects and was asked various questions on the same.
    - Coding problem on graphs, which can be solved using topological sort.
- In Interview 2&3, asked to write code on paper once they were satisfied with my algorithm.

Sources of Preparation

- Coding preparation was mainly done on Interviewbit, geeksforgeeks, leetcode. Lecture slides of OOP, DBS, DSA, Computer Networks, Operating systems. Reports and presentations for projects and internship.

Courses and Certification

- These courses are necessary for all companies in general.
    1. DSA
    2. OOP
    3. OS
    4. Computer Networks
    5. DBMS

Other Relevant Information

- Revising the concepts of all the above-mentioned courses is must. All electives(mentioned ones on your resume) need to be revised as well.
- Graphs and DP are important areas for coding round.

Sector: IT

Name: Vivek Singhvi (2015A7PS0108P)

Company: Uber

Profile: Software Developer

Recruitment Procedure

Received Pre Placement Offer on the basis of summer internship.

For internship procedure refer pu chronicles for internship.

Sources of Preparation

GeeksForGeeks, Hackerrank

Courses and Certification

CS Dels

Sector: IT

Name: Darshil Kapadia (2015A7PS0113P)

Company: Uber

Profile: Software Engineer

Recruitment Procedure: PPO

Internship recruitment consisted of:

1. Online Coding Test
2. Technical Interviews
3. HR + Technical Interview

Coding test contained 3 questions, out of which one was based on dynamic programming, one on dynamic programming. Technical interviews consisted of Data Structure, and Dynamic programming based questions. The focus was on writing pseudo-code, followed by writing clean, modular code for the problems on laptop. The HR + Technical interview had standard HR questions along with an in-depth discussion of projects listed on the resume.

Sources of Preparation:

Competitive Coding from HackerRank and InterviewBit. Mostly course projects and PS-1 project was discussed.

Other Relevant Information

Make sure to write clean code and not just working code. Proper indentation, variable naming, modular structure, etc are important as they focus a lot on good coding practices.

Sector: IT

Name: Arjun Kumar Choudhary (2014B4A70719P)

Company: Tesco

Profile: Associate Software Development Engineer

Recruitment Procedure:

Online test, Technical interview, HR

- Online test on Hackerrank which consisted of 2 coding questions. One question was on array implementation and the other one was on graph traversal.
- Technical round:- Only one technical round was there extending upto around an hour (some people had 2 rounds also). Questions were mainly on simple concepts of OOP, OS and Computer Networks. Some simple DSA questions were asked based on graphs and dynamic programming. Some questions on NP hard and NP complete problems were also asked.
- The HR round was very simple and standard questions were asked. The interview was kind of informal and the interviewer was mainly interested in knowing about me and my achievements.

Sources of Preparation

- Geeksforgeeks, InterviewBit, Codeforces

- Lecture Slides

Courses and Certification

- CS CDCs, Machine Learning, Neural Networks

Other Relevant Information

Try to discuss your approach with the interviewer in detail as much as possible. Even if you are not able to come up with the most optimal solution, discuss your approach as the interviewer will start giving you hints which will help you further.

Sector: IT

Name: Sahaj Srivastava (2015A7PS0091P)

Company: Tesco

Profile: Associate Software Development Engineer

Recruitment Procedure

- Resume Shortlisting, Online Test, 1 Technical interview, 1 HR interview ● Test had 3 coding questions:
  - 1 Question was simple ,based on DFS
  - Another was based on Binary Search
  - Third I don't remember
- Test was easy. However, it was important to maintain speed to finish all questions.
- Technical interview :
  - Verify whether a tree is a binary search tree or not
  - Find the median in a stream of numbers (use heap)

- Design a structure to store words in a dictionary (use tries)
- In an array find two duplicate numbers

- HR interview :
  - Tell us about yourself
  - Tell your strengths
  - What leadership roles have you performed in your academic life i.e. projects
  - What are your future plans

Sources of Preparation

I did my preparation mainly through geeksforgeeks and hackerearth.

Courses and Certification

DSA, OOP, C programming, OS

Other Relevant Information

If you are preparing for IT sector than you need to know (MUST) how to implement basic data structures, how to apply them in problems and what are there time and space complexities (Hackerearth is good for this)

Let them know your interests (It may be outside their job requirement). They take them seriously.

Ask question (Maybe about the role you are applying. NO SILLY QUESTIONS) Don't lie because it is very easy to catch. They are EXPERIENCED.
Spend time on building resume. You may have to alter it according to job requirement.

Sector: IT

Name: Ekansh Jain(2015A3PS0166P)

Company: Tesco

Profile: Software Engineer

Recruitment Procedure Online

Test:

- Online Test on Hackerank. The difficulty of test was medium. There were 2 questions of medium difficulty level. One was based on binary heap/dynamic programing and the other was general adhoc.
- Around 10-12 people were shortlisted after the online round. People who were able to do about 1.4 questions and above were shortlisted.

INTERVIEW:

- There were three rounds of interviews. 2 technical and 1 human resources.
- The first technical round wasn't very exhaustive. There were a lot of generic questions to begin with. Resume was analysed and a few basic things were discussed. Thereafter there was a design problem that was asked in the first round which is supposedly the make or break deal of the interview.
- The second round was more intensive in terms of technical proficiencies. First half of the interview was focused on one of the projects that I did. The interview had a fair bit of idea about it and dug deep into it and asked a lot of questions about it. The latter half was focused on a couple of generic DSA problems, which you should be able to crack given you are already clearing the written tests.
- The last round was the HR round. The HR was quite friendly. Basic things about ourselves, our basic traits, our families etc were asked. Just another routine HR interview.

Sources of Preparation

Interviewbit, Geeksforgeeks, Hackerearth

Courses and Certification

None

Other Relevant Information

It's not just about clearing the online round. The interviewing sequence was based on our online test scores and they usually tend to prefer students with higher scores first. That being said, there's no hard and fast rule to say that people with the higher online test scores will only get selected or not, it's just that the company inherently develops some favouritism for those people which can easily be made or broken during the interviews.

Sector: IT

Name: Vignesh Nanda Kumar (2015A7PS0355P)

Company: Tesco

Profile: Associate Software Development Engineer

Recruitment Procedure

1. Online test: Had 2 coding questions. One was a simple question. Other was based on Dynamic Programming.
2. There was one technical interview which consisted of discussions on my projects. Some discussion on distributed computing was done. Then a questions on regex was asked. Then two coding questions were asked. One question was on arrays, other question was to check whether a given binary tree is a BST or not. Conceptual questions based on OOP and OS were also asked.
3. The HR interview (leadership round) consisted of questions on me and my life. My internships were discussed. Some hurdles I faced during my internships were also discussed.

Sources of Preparation

Geeks for geeks, Hackerearth , Hackerrank, InterviewBit

Courses and Certification

OS, OOP, DSA, DBMS

Other Relevant Information

In the final HR round, you need to be able to convince them as to why you would be a good fit in their company. All your answers should ideally converge and build on this fundamental idea. Recalling information from the PPT is an added bonus.

Sector: IT

Name: Tanvi Aggarwal (2015A7PS0140P)

Company: Swiggy

Profile: Software Developer

Recruitment Procedure

- **Online test:** There were 3 coding questions (based on Heap, BFS in Graph and Arrays) that were fairly easy. People who solved all the questions were shortlisted for the next round.
- **Technical Interview 1:** The first question was a puzzle. The second one was a coding question - given a binary tree node, print the values of the children of the nodes that are to its immediate left and right (at the same level). After writing code for this question, the interviewer extended it to n-ary trees. Languagespecific internal implementations of chosen data structures were also analysed and discussed in detail.
- **Technical Interview 2:** First, there was a thorough discussion about projects. After that, the following question was asked:
    - Search for k most common words in a very large document. The desired approach was using Heap (to store [string, freq]) and Trie (to store all words). Further space optimization and possible parallelization methods were discussed, such as construction of multiple tries and merging.

  The main focus was again on choice and implementation of data structures and associated trade-offs.

- **Technical/HR Interview:** This was a telephonic interview with one of the senior members of the company. There were a lot of questions regarding projects and resume, hobbies, aspirations etc.

Sources of Preparation

Geeksforgeeks, InterviewBit, Hackerrank etc to practise solving questions.

Courses and Certification

No special course other than Data Structures and Algorithms needed as such.

Other Relevant Information

In-depth knowledge of data structures and language specific internal implementations would be useful.

Sector: IT

Name: Sachin Misra (2014B5A70853P)

Company: Publicis Sapient

Profile: Software Developer

Recruitment Procedure

There was first an online round, where there were MCQ sections on aptitude, technical aptitude, Java, C and Cloud Ops. In the end there was a coding question as well. Since there are a lot of questions to be attempted in a short span of time, make sure you do not get stuck on a problem for too long. After that the shortlisted candidates were called for interviews. There was one round of technical interview and one round of HR interview. The technical interview went on for 1-1.5 hours and mostly design problems were asked where they just wanted to see your approach rather than minute implementation details.

Apart from that some DSA problems were also asked. In the HR interview, they asked a lot of behavioural questions trying to gauge your response in various challenging situations. The HR interview also went for 30-40 minutes.

Sources of Preparation

For the design problems, you can watch the tutorials of Tushar Roy on system design, and also have a look at the book *Cracking the coding interview*, both of which will give you an idea of how to go about the problem and what factors to consider. For the DSA part, Geeks for geeks should be enough.

Courses and Certification

You must be well versed in DSA, DBMS and OS.

Other Relevant Information

Just do not lose patience, because the interviews will go on for a long time, and do not try to answer questions which you don't know the answer to.

Sector: IT

Name: Subham Swastik Dora(2014B2A70644P)

Company: Sapient

Profile: Associate Software Development Engineer-ASDE

Recruitment Procedure

- Resume Shortlisting, Online Test, Technical Interview , HR Interview
- Online Test consisted of several sections(Aptitude , DevOps , Technical etc.) each with individual time limits. Also, included a coding question (ad hoc).
- Technical interview started with discussion of projects. Then a design problem was asked. Various oop concepts related to the design problem were also asked. At the end he asked a puzzle .

- HR interview consisted of typical questions like weakness, strengths etc.

Sources of Preparation

Geeksforgeeks

Courses and Certification

DBS, OOP , DSA

Other Relevant Information

Think carefully about the design problem and give a high level description of the problem. Also keep explaining the oop concepts used as you move on to describe its implementation.

Sector: IT

Name: Tushar Arora (2014B3A70435P)

Company: Sapient

Profile: ASDE - II

Recruitment Procedure

The recruitment procedure had 3 rounds.

1. The first round was an online test consisting of aptitude, logic based questions, cloud computing questions, java based programming questions and an easy coding question. The coding question didn't had much weightage as compared to the other part of the test.
2. The next round was an interview round. The interview started with the projects in my resume. Almost each and every point in my resume was discussed. Then there was a discussion on two design questions. First, I was asked to design amazon like website. For the next question, I had to design an app which can efficiently display all the food items available in all the restaurants in a locality.

3. The last round was HR round. There were three interviewers. Few of the questions asked from this round were: How is your typically day, strengths, weaknesses, examples from your college life when you played a role of a leader, etc.

Sources of Preparation

Interview Bit, Codeforces, HackerRank, Course Slides

Courses and Certification

DSA, OOP, OS and DBMS

Other Relevant Information

Do prepare well for HR round as well.

Sector: IT.

Name: Tushar Mehtani (2014B2A80287P)

Company: Publicis Sapient

Profile: Associate Software Development Engineer (ASDE) 2

Recruitment Procedure

- Online Test, Technical Interview, HR interview.
- Test consisted of one coding question (easy / moderate level), MCQs: Aptitude (Quant, Verbal, Comprehension, Data Interpretation etc.), Java based I/O, Cloud Computing, JavaScript and Python. MCQs had negative marking.
- Technical Interview was based on projects, Graph based problem and a system design problem.
- HR interview was mainly a cultural fit interview. If you attend the company's PPT, you'll know what to say.

Sources of Preparation

Interviewbit, Geeksforgeeks, Data Structures and Algorithms made easy by Narsimha Karumanchi, BITS slides for OOP and OS

Courses and Certification

OOP, OS, DSA. Some background on DBMS and Cloud computing might be a plus.

Other Relevant Information

- In the technical round, the questions are intentionally left vague and they expect the candidate to clarify stuff. Before making any assumptions, check with the interviewer. This would be true for any interview in general.
- The HR round was just as important as people were rejected after that as well. So, study about what the firm does, attend the PPT on campus to get an idea about what they are looking for and frame your answers accordingly.

Sector: IT

Name: Dhananjay Mantri (2015A7PS0139P)

Company: Rubrik

Profile: Member Technical Staff

Recruitment Procedure

The procedure comprised one online coding round followed by 3 rounds of technical interview.

Coding Round

The coding round was conducted on HackerRank and had 3 coding questions along with 9 MCQs. The test duration was 2 hours. The languages permissible for the coding questions were the usual ones HackerRank supports. The MCQs were single-correct and based on OS, DSA, and DBMS. If the candidate is clear with the basic course concepts, the MCQs should not be a problem.

Coding Question 1: This was a Data Structure question. The candidate was expected to code a data structure that could solve the given problem. According to the problem statement, the user would have to perform the following operations on the input:

- Insert – For this operation, the input line will have a string and an associated score. The user must store the string along with its score. If the string is already present, then the score of the string will get updated with the current score.
- Delete – For this operation, the user will have to delete the string and the associated score.
- Top k – For this operation, the user will have to find the string whose score is kth from the top. In case there is a tie, the user must print the lexicographically smaller string.

Coding Question 2: This was a Combinatorics question. A person has to go from (0,0,0) to (n,0,0) where each step he takes from (x,y,z) can lead him to one of (x+1,y+1,z), (x+1,y-1,z), (x+1,y,z+1), and (x+1,y,z-1). The question asks the number of ways in which this is possible (modulo 10^9+7). As n <= 10^4, one has to be very careful of integer overflows when dealing with this question.

Coding Question 3: A DP question

Interview 1

Discussed my internship project with the interviewer. Had to code the algorithm for finding the min diff between 2 files. The code had to be written on paper. Was also asked for my approach in a situation where a range update on an array and display of an array element both must be performed in O(log n) or less time. **Interview 2**

Based on OS concepts. The round began with the discussion of my previous work experience and was followed by discussion and code of Reader-Writer problem. The round concluded with the coding of a multithreading problem making use of semaphores.

Interview 3

Based on DSA. A single problem was given, the solution of which I had to code on paper. The question made use of HashTable and AVL tree for finding the efficient solution (not the corresponding STL containers).

Sources of Preparation

GeeksForGeeks and Interviewbit are excellent resources for preparation. Apart from that, competitive coding experience always helps for both the coding round and the interview.

Courses and Certification

DSA and OS concepts were tested during the recruitment process. It also helps if the interviewee is clear with the concepts of DBMS and OOP.

Other Relevant Information

It is recommended that the candidate gets used to coding platforms like Hackerrank and CodeChef for the coding rounds. A person who has experience of short contests [particularly, the CF Div2/Div1/(and now Div3 as well!)] will have an edge. For the interview, the person is required to code on paper, so it is advisable that the candidate is also comfortable with writing code on a sheet of paper. It is better to voice your thoughts instead of attempting to solve the question silently – the interviewer can give you hints only if he knows your approach!

Sector: IT

Name: Anubhuti Mishra (2014B1A30632P)

Company: PayPal

Profile: Software Engineer

Recruitment Procedure

- Online Test, Personal Interviews,HR
- Online Test had questions about DP and graph.
- First 2 interview rounds were technical. First one had basic array manipulation and graph traversal,approach for LRU cache.I was also asked to explain about my projects mentioned in resume.

- 2nd interview basically had a system design question namely designing a URL shortener and optimizing it for large and concurrent inputs. Also I was asked to explain how is java platform independent.

Sources of Preparation

InterviewBit and GeeksforGeeks. Also practising questions from the archives would be very useful.

Courses and Certification

Data Structures and Algorithms is something you'll need for every interview.OOP related concepts and theoretical basics about the language you code in.

Other Relevant Information

The good part about the PayPal process was that it was skill based than being discipline based. Also be thorough with your projects and things mentioned on the resume.

Sector: IT

Name: Shiwang Gupta (2015A8PS0449P)

Company: Paypal

Profile: Software Developer

Recruitment Procedure

- Coding round consists of 2 questions. One was from dp and other was from graphs. Both questions were quite tricky. About 15 students got shortlisted for the next round.
- 2 technical interviews and 1 hr interview
- In 1st technical interview 2 questions were asked. First one was an easy dp question. The 2nd question was that you have been given a family tree. For each node, name and its gender would be given. The nodes at same level

denote brother/ sister depending on its gender which would be given. The first part of the question is to answer ancestor descendent relationship query in O(1). In 2nd part you have been given a query denoting name and its relationship. For e.g. Rahul and brother. Now, you have to print all the brothers of Rahul. The relationship can be anything like brother, sister, father, mother, grandfather, grand grandfather etc. You have do it in the most optimal way. You have to write the whole code on paper.

- In 2nd technical interview, 1 question was asked on dsa. The question was that you have to use an appropriate data structure to check any error in an html document. The error can be anything like spelling mistake, not writing closing tag, writing closing tag before opening tag, wrong ordering of tags etc. (can be anything). The interviewer clearly explains how an html document is written. You have to identify possible errors yourself and what errors are you covering in your solution. You have to give the most optimal solution. Firstly, I proposed a solution using 2 data structures. Then, I was told to optimize it more and use only 1 data structure that cover all the test cases. You have to write the whole code on paper.

- Then, the interviewer asked me about my strong subject other than dsa and I chose operating system. Then, she asked a question on os. It was a simple question. You have been given 2 cpu's, different processes, their arrival time, burst time etc. You have to schedule the processes by using any scheduling algorithm. You have to decide which scheduling algorithm would be best for that case, schedule them and justify why you chose that scheduling algorithm and not others.

- Some students have to give 3 technical interviews but my first two rounds got really well. So, my third round was an hr interview. Interviewer asked me some general questions about my family etc. and why do you want to go to IT as I am from electronics background. Then, he told me about some of the work that is going on in their organization and the technologies they are working on. He asked me about some of the new technologies like relational database and messaging queue that is being used in the industry presently. It was just to check whether I am aware of these technologies or not. He didn't go much deep into that. Then, he asked me some abstract questions like what changes can google do to improve their business. Then, he again asked

me my favourite subject and I chose Operating System. He asked me some questions on Process synchronization and multithreading.

Sources of Preparation

GeeksforGeeks and InterviewBit are more than sufficient for preparation. You can watch online videos of tushar roy, gaurav sen, iDeserve, mycodingchool etc. for the topics that you didn't understand from gfg. It is very important to cover each topic in the oop section on gfg for preparing for oop.

Courses and Certification

Data structures and algorithms, operating systems, object oriented programming, neural networks and fuzzy logic

Other Relevant Information

Technical interviews were really good. The main focus was on your approach to find a solution. They gave sufficient time to think. So, better not to hurry and think properly before proposing a solution. Keep communicating and sharing your thoughts with the interviewer and write clean code. The papers on which I have written code along with the remarks of the interviewer were passed on to the next interviewer.

There was no biasing on the basis of branch or cg. You don't need to study any other course that I have not mentioned above.

I suggest you to ask some question to the interviewer at the end of interview about some work in the organization or the department you would be offered if you got selected etc. It shows that you are seriously interested to work in their organization and increase your chances of getting selected. All the best.

Sector: IT

Name: MANIK (2015A3PS0203P)

Company: PAYPAL

Profile: Software Engineer

Recruitment Procedure: Online Test, Technical Interviews and an HR interview

- The online test was quite tough. There were 2 coding questions to be submitted within 1 hour and 30 min. The first question was a tough DP question can be found on Leetcode by the name cherry pickup(I left that question on leetcode considering its difficulty level and thus panicked after seeing it in the test) and the second question was based on graph dfs.
- I had 3 technical rounds of interview and 1 HR cum managerial round. The technical rounds were pretty interesting, the questions were to code real life applications. I was asked to code for a juice extracting factory using multithreading and in another interview was asked to develop a phone contact list which could even give suggestions using the prefix searched(Do study Trie data Structure) and in another interview was asked to build a tiny URL algorithm(I was not able to give the perfect answer but was able to provide a good approach). They were not expecting perfect answers from us, they were only looking for our perspective to approach the problem.
- The last round was the HR round. It started with a bit of typical HR questions followed by 2 puzzles(these are must,anybody sitting for placements must go through them once) and a question based on Paypal's daily work(it was a coding question but I wasn't asked to code,he was happy enough with my approach).

Sources of Preparation

- GeeksForGeeks is must.
- For basic logic development you can start with hackerrank or similar sites if you have time. I personally did LeetCode.
- In last 2 months of preparation try to complete interview bit as it provides you the environment of Online Tests
- For puzzles: Go through the puzzles on geeks as well as interview bit. **Other**

  Relevant Information

Hardwork is the key.

Sector: IT

Name: Meet Parikh (2015A8PS0375P)

Company: PayPal

Profile: Software Engineer

Recruitment Procedure

- Online Coding Test, Technical interviews, HR interview.
- Online Test had 2 questions. One was based on Graphs and the other on Dynamic Programming. Difficulty level : **Medium** | Duration : 2 hours
- First Technical Interview :
  - Basic array manipulation and Tree traversal questions.
  - Code/Pseudo-code was expected for every question.
  - Difficulty level : **Easy** | Duration : 30 - 35 minutes
- Second Technical Interview :
  - Basic DP questions (Longest Palindrome substring etc.)
  - System Design question constructed around the task of managing a consultation clinic.
- Pseudo-code was expected for every question.
  Difficulty level : **Medium** | Duration : 45-50 minutes
- HR interview :
  - General questions regarding family, hometown and political atmosphere of the country.
  - Detailed discussion on the Google spell-correct algorithm
  - Difficulty level : **Easy** | Duration : 40-45 minutes

Sources of Preparation

- InterviewBit and GeeksforGeeks company specific questions.
- Questions from GeeksforGeeks archives of the company you are appearing for.

Courses and Certification

- DSA, OOP, IR
- Theoretical concepts of the language you prefer coding in.

Other Relevant Information

- PayPal doesn't have a discipline bias. They just look for the skills they require.
- Be thorough with the points you mention on your resume.

Sector: IT

Name: Lovish Arora(2014B3A70749P)

Company: Oracle

Profile: Application Developer

Recruitment Procedure:

- Resume Shortlisting, Online Test, Technical Interviews, HR
- The pre-interview test comprised of both programming based and aptitude questions. The duration of test was around 107 minutes. It was conducted on Oracle platform and had no negative marking.
- In total, there were 4 to 5 sections. Each section had a separate sectional timer. You can attempt the sections in any order you wish. The key to clear this round is to attempt a fair number of questions with good accuracy. The various sections were classified as follows:
    1. Aptitude
    2. Data Interpretation
    3. Contextual Communication

4. Data Structures related problems (mostly Multiple Choice): Trees, Graphs, Recursion

5. Computer Science (Course related stuff): OS, DBMS, C++ (OOP), Computer Networks

- Tip: Rather than attempting all questions, try to attempt the questions with a great accuracy. Maintaining speed is very important.
- Attempt those sections first which you consider as cake walk for you.
- Number of Technical Interviews may vary from two to four rounds. There was a wide disparity in the kind of questions that were asked by interviewers. DBMS is a must with special emphasis on Normalization, ER diagrams and Conceptual Design of Schema, Transactions and Concurrency. Pen-and-paper based coding of Algorithms is a must for almost every second interview.
- In First Technical Interview, I was asked to write complete code for traversing an N-ary tree in a zig-zag fashion, finding median in a running stream of integers and difference between relational and non-relational databases and further discussions on NOSQL databases. My summer project at IIT Kanpur was also discussed in brief. Be thorough with your resume, even if you don't know the technical details of the project, at least try to explain the purpose of the project.
- Second Technical Interview had just one question. I was given a part of database. First I had to identify all the functional dependencies in the database. After that, I had to carry out the complete Normalization procedure to remove redundancies up to BCNF. Just keep explaining your approach after completing each round of normalization. Then he asked me about de normalization and when we need to de-normalize a database. This was followed by discussion of Pre-Placement Talk, try to remember the names of a few products they are working on. He also asked me about my JEE rank.
- Immediately after this round, I was sent to HR. I had one more interview that day, he asked me about my preference order to which I acted in a diplomatic manner. He then asked me to give him one reason why they should not

select me for this position. This was followed by general HR questions and discussion about work culture at Oracle.

Sources of Preparation:

- GeeksForGeeks (read articles and puzzles)
- InterviewBit
- Hackerrank (graphs)
- Hackerearth (graphs and dynamic programming)
- Studytonight for coursework
- Leetcode

Courses and Certification

- Important courses:
    1. Database Management Systems
    2. Data Structures and Algorithms
    3. Object Oriented Programming
    4. Operating Systems
    5. Computer Networks
    6. Project related courses

Other Relevant Information

- Focus on clearing coding tests and practice problems on online platform. Revise major concepts side by side to avoid anxiety after clearing coding rounds.
- Be thorough with all bullet points on your resume.
- Pen-paper based coding practice is must.
- Try to solve coding questions in time bounds.

Sector: IT

Name: Gurajapu Sravan Sriharsha (2015A7PS0063P)

Company: Oracle India Pvt Ltd

Profile: Application Engineer – Applications Development Group

Recruitment Procedure

- Online Test, Technical Interview(3 rounds), HR Interview.
- Online Test:
    a) Consists of multiple choice questions with different sections like English, Aptitude, Computer Science topics(Operating Systems, Object Oriented Programming, Data Structures).
    b) The questions were easy but one has to keep track of the time.
- Technical Interview:
    a) Round 1: A detailed discussion on the projects done previously in other companies, Print numbers from 1 to n^2 in a spiral format, Find the fastest three horses puzzle, Egg dropping puzzle, Difference between TreeMap and HashMap(other student).
    b) Round 2: Boundary traversal of binary tree, 3 hat puzzle, Normalize a table to 3NF(other student).
    c) Round 3: A cube is painted on all faces with black color and is cut into 64 pieces, find the no of small cubes with 1 side painted, 2 sides painted, 3 sides painted and no side painted, Helium balloon puzzle(other student).
- HR Interview:

    Asked about general questions like any plans for higher studies, what interested you the most about Oracle etc.

Sources of Preparation

Online test can easily be cleared as 60 students were shortlisted out of nearly 120 students. The main focus should be on Data Structures questions available in GeeksForGeeks and one should be able to quickly tell the output of small code fragments.

For technical interview:

a) GeeksForGeeks and InterviewBit : Puzzles

b) Knowledge Gate Youtube channel : DBS concepts will be revised quickly when compared to other sites.

c) Tutorials Point, GeeksForGeeks : Java questions.

For HR interview:

Attend the pre placement talk and listen carefully as you might be questioned about the future plans/ projects specific to that company.

Courses and Certification

Be thorough with all the concepts of Data Base Management Systems (especially normalization and transactions), Java, Data Structures and SQL.

Other Relevant Information

In order to clear the coding rounds for any company(except Oracle where MCQ's were asked), one must practice coding for minimum of 2 months before the placements and the main focus should be on the following topics: Graphs, Dynamic Programming, Trees, Maps, Hashing. This can be done by practicing questions in InterviewBit. Even though you don't code but you have some basic idea in C/Java, you can start InterviewBit without any hesitation.

Sector: IT

Name: Govind Mittal (2014B4A70530P)

Company: Oracle

Profile: Software Developer

Recruitment Procedure

- Online Test

- Oracle took test on its own platform with large number of sections having small number of questions along with separate timings.
- Test questions ranged from Quant, English and Programming.
- All questions were MCQs.
- Test was easy, but the sheer number of questions and timing constraint on each section made it difficult.
- Technical Interview - 1
- Asked about Java and its Collections framework. I was repeatedly asked about what are the different data structures in it.
- C Programming - questions on pointers and macros.
- It was clubbed with many simple yet intuitive puzzles.
- Ample time was given and the interviewers were very patient.
- Technical Interview - 2
- There was only one question of resource allocation which was asked on paper. The question was although solvable using various graph traversal techniques, but linear programming gave the most elegant answer.
- HR Interview

Sources of Preparation

OOP concepts and Collections framework should be strong.

Courses and Certification

No certification is needed. Oracle offers some certifications like OCJP, but they do not look for them in the interviews.

Other Relevant Information

Oracle does not require strong competitive coding edge but does require confidence over your thinking process. Even if you have said something wrong you need to have backing for why you are thinking in this direction.

Sector: IT

Name: Nikhar Maheshwari (2015A7PS0128P)

Company: Oracle

Profile: Applications Engineer

Recruitment Procedure

- Online Test, 2 Technical Interviews, HR Interview ● Test had 4 MCQ sections:
    - ○ Quant
    - ○ OOP Questions (Java and C++)
    - ○ Theoretical Computer Science (Databases, Networks, C basics)
    - ○ Verbal

  Test was easy. Time was the constraint in both the computer science sections. Leftover time from one section did not carry onto the next one and revisiting any section wasn't allowed. Though, in a section, questions could be revisited, if not already answered.
- TI-1 : Questions on work done at summer internship; Questions on C++ (friend functions, virtual functions, etc.); Code for the coin change problem; Design relations (tables) in C in order to optimize joins - just the idea, code wasn't required.
- TI-2 : Problem on normalization. Database was given, had to be converted into 3NF; A simple puzzle;
- HR : Tell us about yourself, why oracle, etc.

Sources of Preparation

Interviewbit for puzzles and coding test preparation. Cracking the coding Interview for interview prep.

Courses and Certification

Nothing out of the curriculum of computer science.

Other Relevant Information

Prepare databases really well. Being good at SQL can give you an upper hand.

Sector: IT

Name: Aman Gupta (2014B2A70201P)

Company: Nutanix

Profile: Member of Technical Staff

Recruitment Procedure

- Online Test, Debugging Round (Pen-Paper), Technical Interviews, HR Interview
- Online Test (Hosted on Hackerrank) had 2 coding questions (Both on Graphs) and time given was 1 hour
- In the Debugging Round, a problem statement was explained and its code was given to us. We had to identify bugs in the code and resolve them. It was based on Synchronization (Operating Systems)
- 3 Technical interviews consisting of Coding Problems & questions on Operating Systems. The solution to the coding problems was to be explained followed by writing the code
- The technical interviews were followed by an HR Interview which was a general interaction with the HR

Sources of Preparation

- Geeksforgeeks, InterviewBit, Codeforces

- Lecture Slides

Courses and Certification

- CS CDCs, Machine Learning, Data Mining, Artificial Intelligence

Other Relevant Information

- Discuss your approach with the interviewer, do not sit silently if you're not able to come up with a complete optimal solution to the problem given

Sector: IT

Name: Monisha Nair(2017H1120241P)

Company: NetApp

Profile: Member of Technical Staff

Recruitment Procedure

- Online Test : 1 hour coding round , it had two coding questions one was easy and the other was of medium difficulty , part two of the online exam was a 30 minutes online test which had a mix of aptitude , puzzles and technical questions. Technical questions were mainly from networks , os , data structures and unix.
- There were 2 technical rounds followed by an hr round.
- The first technical round was focused on programming skills and os. I was asked to write implementation of memcpy function in C , questions from os were mainly from process synchronisation. The interview went about for 45 minutes.
- The second technical round was resume based. As I had mentioned data mining projects in my resume, situation based questions were asked on how data mining would be applied on those situations. I was asked, given the data of viewers of football match how would I predict the winning team. Other

questions asked was how I would collect the data of website viewers, find malicious activities and prevent them. The interview went about for 30-45 minutes

- In the hr round questions asked were simple , like what is my perception about NetApp , what kind of a person I am and what do I like about Bangalore and few more similar questions. The hr round went about for 1520 minutes.

Sources of Preparation

GeeksforGeeks , InterviewBit , Leetcode , Hackerrank , Coremen

Sector: IT

Name: Shilpi Bansal (2017H1120230P)

Company: Nagarro

Profile: Software Developer

Recruitment Procedure

- Resume Shortlisting, Online Test,Technical Interview, HR ● Test had 2 sections:
  a. MCQs
     - Questions on Data Structures, algorithms, O.S. etc. Basic Computer science related questions. Questions on complexities of standard algorithms. This section was moderate.
     - General Aptitude questions, algebra questions and some geometry questions. Geometry questions were tough.
  b. Coding

3 coding question, related to mathematical concepts like permutation & combinations, factorial.

- Interview Round 1(Technical):

a. Only one technical interview.
b. Asked about my projects in depth. I explained my cloud computing project. He asked many questions related to the project, which I was able to explain properly.
c. Asked questions from the things I mentioned in my resume.
d. He asked me a question on image processing as I have done a project in opencv. He asked me to detect a circle in a canvas algorithmically.

- Interview Round 2(HR):

Typical HR questions were asked like

- Why do you want to join Nagarro
- Strength, Weakness
- How many rejections you have faced till now etc.

Sources of Preparation

GeeksforGeeks, InterviewBit, Gate notes for subjects, R.S. aggarwal for Aptitude.

Courses and Certification

I have done a course on Cloud Computing ,which helped me a lot.

C.S subjects like O.S, DBMS, C, Computer Networks are very important for interviews as well.

Other Relevant Information

Test was long because it was covering all the sections. Webcam was needed for the test so we attempted it on our laptops.

Sector: IT

Name: Pratyush Dubey (2015A7PS0132P)

Company: Myntra

Profile: Software Engineer

Recruitment Procedure

- **Online Test –** The test was exactly same as given on GFG. The 6 MCQs were pretty easy.
- **Interview Round 1 (Tech) –** Started with "Tell me about yourself". Talked briefly about my POR. Two questions followed.
    - Question 1. The question was similar to Parachuted Robots. I was asked to write a piece of code which is executed line by line, simultaneously by both of these robots such that they meet at a point. But *only* following constructs and functions were allowed to be used - *while*(), *if*(), *isOnParachute*(), *haveMet*(), *L*(), *R*(), *skip*().
    - Note that *else* and *not (! or negation)* were not given and hence can't be used. I had to clarify multiple aspects of the problem. I tried and my best solution had both the robots at the same point but the execution of one of the robots would be stuck in a while loop. I told him that I can get the solution if *break* keyword is provided.
    - Then he started suggesting some changes in my code and asked if they would work. I pointed out the mistakes in his approaches. This question went on for a full hour. Then he started moving to the next question but I asked him for the solution. He said even he did not know the solution and was trying to solve the problem with me. He just wanted to see how I approached the problem! ○ Question 2 – Print "hello world" n^n times where n belongs to [1, INT_MAX]. Recursion problem as no variable can store INT_MAX ^ INT_MAX. Gave the correct code in second attempt.

- **Interview Round 2 (Tech)** - She went through my resume. Started talking about the projects. I explained her the *latest* project I had completed. Detailed discussion on the project followed.

- Asked what my favourite subjects were, I said Computer Networks and DSA. She asked me what OSI model is, what different layers are in it and their uses. Then she asked me to explain the OSI model to a 5 y/o. I explained it using the airport analogy given in the textbook. She next asked about hashing, the principle, advantages, how it is implemented and how the collisions can be reduced in a hash table (by chaining and open addressing). Be ready to answer questions, especially theoretical, on the subjects you say as your favourites.

  Next was a coding question. Given a matrix of 0s and 1s, find the area of largest filled rectangle formed by 1s. I told her the working of my DP approach, she asked why I approached the problem with DP and told me to write a working code for the same.
- **Interview Round 3 (Tech) –** Interviewer asked me what the *best/most relevant* project I had worked on was. It was a web designing + DBMS project. Detailed discussion on it followed.

  Since I had worked on DBMS, he asked me to write a bunch of DBMS queries. For some of the queries, the logic was sufficient. Then he went on asking me theoretical questions from DBMS like what is ACID principle, what are different types of joins and so on.

  Next he asked me to write a code for finding least common ancestor of two nodes in a BINARY tree. I misunderstood him and wrote a code for the same in a BST. He corrected me when I was explaining the code to him, so I modified it for a binary tree.

Sources of Preparation –

Geeksforgeeks and interviewbit for coding questions, lecture slides for DSA and DBS, textbook for Computer Networks and OS.

Courses and Certification - A7 CDCs

Other Relevant Information –

The interviewers were extremely friendly and co-operative. They offered help whenever I needed. It's fine to make mistakes. But you should *never* sit blank and say nothing. Speak up whatever is going in your mind. There was no HR round for me but my colleagues had one.

Sector: IT

Name: Asim Shah (2014B1A70732P)

Company: Myntra

Profile: Software Engineer

Recruitment Procedure

- Online Test, Technical Interviews(2-3), Manager Interview, HR round
- Online Test: Hacker Rank based. Were asked as it is from one of the archives on Geeksforgeeks for Myntra itself (Find Set-10 for input and output examples). So, make sure to check that.(Brute-force approach with small optimizations were working for a couple of questions):
    a. There are n-leaves on a straight line numbered from 1 to n. A caterpillar starts from 0 and starts eating the leaves with some condition. There are total of k-caterpillars and their jump numbers are given in an array. A caterpillar with jump number 'j' eats the j, 2j, 3j, …. leaves till n. Like this every caterpillar will eat the leaves respective to their jump numbers. Find out the number of leaves uneaten at the end.
    b. Jamie is walking along a number line that starts at point 0 and ends at point n. She can move either one step to the left or one step to the right of her current location , with the exception that she cannot move left from point 0 or right from point n. In other words, if Jamie is standing at point i,she can move to either i-1 or i+1 as long as her destination exists in the inclusive range [0,n]. She has a string ,s , of movement instruction

consisting of the letters 1 and r , where 1 is an instruction to move one step left and r is an instruction to move one step right.
Jamie followed the instructions in s one by one and in order .For Example if s='rrlr', she performs the following sequence of moves :one step right >one step right ->one step left -> one step right. Jamie wants to move from point x to point y following some subsequence of string s instruction and wonders how many distinct possible subsequence of string s will get her from point x to point y.

c. Find out the sum of common prefixes (common character from starting) of a number with itself by removing first i characters. (i = 1, 2, ….., n-1), n -> length of string.
d. Calculate the cumulative sum of the array and keep track of the minimum, if minimum less than one return (min*-1)+1; else return 0.

- Technical Interview 1:
  a. Brief introduction and resume based questions
  b. A simple DP based question to find number of ways to form a sum using various denominations of coins given.
  c. Design a data structure such that given an infinite stream of input integers, it can respond to queries at any given time about the k-most frequently appearing integers.
  d. Given an array of integers, find the maximum product using three of the integers. (Integers can be negative or 0).(O(nlogn) expected) ● Technical Interview 2:
  a. Make a function that produces an hourglass like pattern given an input n, where n is the number of lines in the first half of the hourglass.(O(n) expected)
  b. Given a function that prints something, call that function n^n times. nothing can be stored and running a normal loop is not possible as n can be as large as long int.(O(n^n) expected)
  c. Given a binary tree, increase all the node values by the sum of all nodes that come before it in the pre-order traversal of the tree.(O(n) expected, without use of any global variable)
  d. Determine the number of integers a given number 'k' divides in the closed interval [a,b].(O(1) expected).
- Technical Interview 3:

a. Given an array, find all possible Pythagorean triplets that can be formed using three of its integers.(O(n^2) expected)
b. Given a binary tree, output the rightmost element in each level.(The question was asked in a twisted fashion, O(n) expected).
c. Given a sorted array with each integer occurring only once, whereas one integer appeared more than once. Find the starting and ending indexes of that integer in the array.(O(logn) expected) ● Manager Interview:
a. Gave a brief about Myntra and roles.
b. Resume based questions about internships and projects.
c. Implement a stack using queues.
d. OS based questions:
    - Difference between Multitasking, Multithreading, Multiprocessing and Multiprogramming
    - Semaphores and Mutex
    - Scheduling
e. ACID properties
f. What happens after a website URL is entered in a browser?

- HR round:
    a. Why Myntra?
    b. Explained benefits and perks
    c. Explained salary and appraisal.

Sources of Preparation

InterviewBit and GeeksForGeeks are sufficient for coding rounds

Maybe a brief reading of CLRS would help.

Courses and Certification

DSA is of prime importance

Other courses in order of importance are OOP, DBS, OS and ComNet.

Other Relevant Information

DSA Topics: Strings, Arrays, Linked Lists, Sorting Algos, Binary Search, Two Pointers, Binary Trees, Tries, BSTs, Maps and Hashing, Stacks and Queues, DP and Greedy, Graph Algos: BFS, DFS and Djikstra(Kruskal and Prim's, Bellman Ford are good to know)

OOP Topics: Objects, Classes, Inheritance, Abstraction, Polymorphism, Encapsulation, Access Modifiers and their scopes, Keywords like Static, Final, Abstract, Const, Design Patterns, Constructors, Copy Constructors, Destructors. Virtual Function, Virtual Table, Virtual Pointers for C++. Object Class and its methods, Collections Framework for Java.

DBS Topics: Normalization, ACID Properties, SQL Queries, NoSQL Databases, Indexing.

OS Topics: Scheduling, Synchronization, Deadlocks, Paging and Virtual Memory

These topics are the prime focus for all IT companies.

Sector: IT

Name: Saakshi Khandelwal (2014B3A70626P)

Company: Myntra

Profile: Software Engineer

Recruitment Procedure

- **Online Interview:**

  5 questions were asked. 4 of them were same as those mentioned in Myntra archives (Set 10) on Geeksforgeeks. 5th was a very simple array manipulation question.

- **Technical Interview 1:**

  1. Find number of ways to form a sum using various denominations of coins given.
  2. Given an array of integers, find the maximum product using three of the integers.
  3. A simple question on 1-D array manipulation and on linked list.

- **Technical Interview 2:**

    1. Given a sorted list of repeating numbers, find the first and last index of a particular number. The interview kept modifying this question and took interview to different directions. He basically wanted to see how well can I modify the binary search algorithm for different questions.

- **Technical Interview 3:**

    1. Discussed about Myntra and the roles.
    2. Questions on OS, Computer Network (since I had done Summer internship in Cisco), DSA, DBMS.
    3. Delete a linked list node when the pointer to the node is given.
    4. What happens after a website URL is entered in a browser.
    5. Difference between multitasking, multithreading and multiprocessing.

- **HR Round:**

    Discussed about how the various programs for encouraging women to IT sector is changing the recruitment process of the companies and asked about my opinion for the same. Asked if my parents are okay with me working abroad. It was a very casual round.

Sources of Preparation

- Geeksforgeeks is a must for company-wise preparation.
- Practise coding questions and puzzles from InterviewBit.

Courses and Certification

DSA, OS, OOP are of utmost importance. Questions are generally asked from the subjects you mention on your resume or the ones you say you know. Mention only the subjects you are comfortable speaking about

Other Relevant Information

The questions asked are generally not that difficult and interviewers are willing to help if they see you trying. Be thorough with whatever you mention on the resume. Remove the things you are not comfortable talking about. If you don't know a particular course, or a topic, be honest and tell the interviewer about it. Most of the times, they ask about your topic of interest, that is the point you sway the interview to your side.

Myntra's interviewers gave importance to the thinking process and how you approach a problem rather than making you write 100% correct code. Puzzles and design questions can be asked, but they weren't asked in Myntra. However, it is never bad to be overprepared.

Placements can be really brutal, but remember there is one company which is destined for you. So, don't lose hope, no matter how bad your days have been. Surround yourself with positive people who keep motivating you and believe in you.

Sector: IT

Name: Nikhil Kumar (2017H1030119P)

Company: Cisco

Profile: Software Engineer

Recruitment Procedure

- Written Test:- Simple aptitude and quant questions, 50 questions in 60 mins. One can easily solve these questions just keep an eye on timer.
- Those selected were called for the interviews. There were 5 rounds for me (4 TR, 1 HR).
- Round 1:- Asked about the projects and in-depth discussion of favorite project. After that 'pairsum' question was asked. He wanted to know the most optimized approach and later asked me to code it.
- Round 2:- Again in-depth discussion of favorite project and asked me draw the flowchart for it. He asked me 'add two linked list' question.
- Round 3:- Some concepts of oops and 'diff k' question from arrays was asked. He also asked about the paging and virtual memory.

- Round 4:- **HR Round**. Tell me about yourself, Why Cisco, Is Cisco your first priority, any plans for higher studies, Best part about Cisco's ppt. Just one advice be clear about priorities, goals and listen to the ppt carefully.
- Round 5:- **Stress Round**. For some people there was a stress round in which interviewer was asking (kind of rapid fire) questions about the projects and you have to defend your projects.

Sources of Preparation

Interviewbit, Geeksforgeeks

Courses and Certification

No need of any certification.

Other Relevant Information

Your Resume is your syllabus, they can ask anything mentioned in it. Be prepared. Basic concepts should be crystal clear as most of the questions asked were from this category.

Sector: IT

Name: Vibhuti Goel (2017h1240107P)

Company: Cisco Systems Private Limited

Profile: Software Engineer

Recruitment Procedure

- 6 Rounds : -- Online and 5 Face to Face Interviews • Online Test :
    - Aptitude : Basic Aptitude. Start preparing from R.S. Aggarwal and afterwards move to Arun Sharma (at least LOD 1 and LOD 2).
    - C Language (Most Important and Deep Dive Knowledge)
    - Data Structures (Fundamentals like Stacks, Queues, Linked Lists, Trees and Graphs. No need for Advanced Data Structures).

- Computer Networks (IP Addressing , Detection of Class based on given IP Address).
- Operating Systems (Scheduling Algorithms, Concurrency Control etc.).
- Online Test was of Average Level but speed and practice is important for all the questions specially for C and Data Structures.

- 1st Interview Round:
  - Tell us about yourself.
  - Brief description of all the projects from resume and follow up questions. If you have any project in the field the company works, then that project should be studied thoroughly.
  - Differentiate IPv4 and IPv6 and protocols used in them like ICMP and DHCP. Main focus was on this because my projects included working with these protocols. ○ Linked Lists and Hashing. Should be able to write code on paper of at least most fundamentals algorithms.
- 2nd Interview Round :
  - Tell us about yourself.
  - Description about the projects and follow up questions. Interested in IPv4 and IPv6 Questions like changes made from IPv4 to IPv6. ○ Difference between Static Memory Allocation and Dynamic Memory Allocation in layman language along with real life application.
  - Deep knowledge about the concepts used in Data Structures like why any particular step is performed in an algorithm. Linked Lists and Queues are always the hot topics. ● 3rd Interview Round :
  - Tell us about yourself. ○ Basic Questions about pointers, Strings, and Bit Manipulation from C. (Let us C by Yashwant Kanetkar is must for Bit Manipulation).
  - Write your own implementation of strcpy() function of C Language and cover corner cases. ○ Different devices used in Computer Networks live Routers , Switches, Hubs, etc. and difference between each of them.
  - Different layers of OSI Model.
- 4th Interview Round (Mostly HR Questions) :
  - Most HR questions like about yourself, strengths,, weakness, and ready for re location etc.
  - Tell me a word that best describes me. (It was the hot question asked in every round and must be prepared).
- 5th Interview Round (With Director) :

- Meaning of my Name and A word that describes me the best.
- What are your moral values.
- Why do you want to join Cisco (Requires analysis about the company like key people, technical news etc.).
- Being confident is the key of this round.

Sources of Preparation

- Aptitude : R.S Aggarwal and Arun Sharma
- C Language : Yashwant Kanetkar and GeeksForGeeks
- Data Structures : Pick any book and practice from GeeksForGeeks.
- Try to write as much code as possible on pen and paper in any language.
- Operating Systems : GeeksForGeeks.
- Computer Networks : Any standard book or available video tutorials.
- Each and Every concept about your projects.
- Keep a list of HR Related questions and answers for your case and modify them a little as per the company and profile.
- Brain Teasers and Puzzles are also a must for several other companies. GeeksForGeeks is enough.

Courses and Certification

- Not any specific course or certification is required but if done any in the relevant field, it would be an advantage if you have deep knowledge otherwise can be disadvantage as well.

Other Relevant Information

- Most important factor is to keep calm and confident. You don't need to answer every question correctly. Just never quit on a problem even you don't have any idea about it. Tackle with all information you have and try to solve the problem with different approached. Interviewer always wants to check approach and not exact solution.
- Another most important factor is in how much depth and layman language you can explain things. Bookish language is not needed. Explain things in a much simpler and real life example form.

Sector: IT

Name: Siddhant Jhamb (2017H1120243P)

Company: Cisco **Profile**:

Software Engineer

Recruitment Procedure :

- The process started with a highly informative and elaborate **Pre-Placement talk** by the panel. Paying attention to the points covered here could prove important during interview rounds because A. The interviewer can sometimes ask you a question like what did you like the most out of our presentation and how do your goals align to our company goals, and B. At the end of an interview round, you could put forward any question of yours to the panelist based on what you heard from them a day before.

- **Online Test**
  - The CGPA criteria for the company process was 6.0 and above.
  - The test had roughly 50 questions which had to be solved on 60 minutes.
  - The following types of questions were there in the test.
    - C/C++ : Basic aptitude, language features and some output based questions.
    - Data Structures and Algorithms : Questions covering Trees, Linked List, Arrays, sorting algorithms and some other popular data structures.
    - Computer Networks
    - Operating Systems
    - Quantitative Ability
    - Logical Ability
    - Roughly 7-8 were asked from Digital Electronics and Computer Organization.
  - Speed is a crucial factor when it comes to clearing the test

Those who cleared the test were called for interviews the next day.

- **Technical Round 1**
  - The interviewer started with scanning my resume and asking about my interests, the programming language being the most important, because you will then be asked to code in this language only. Whatever I told he was writing it down on a form for future reference.
  - Then I was asked to explain one of my projects related to Blockchain in detail. I got the impression that he was not too informed about the field, so this was more of a discussion wherein he was trying to understand what I did, rather than he asking too much questions.
  - Then he asked me few questions related to REST, as it was mentioned on my resume.
  - He asked me a question on Trees - Convert a tree into its mirror tree, and asked me to code it completely.
  - One more question on Trees - Finding the height of a tree and the code. The last two questions he asked to check whether I was comfortable in coding in C++ language.

- **Technical Round 2**
  - Again this round started with the interviewer asking me about my interests.
  - He then asked me to explain a project on my resume related to web development. He wanted to know about it end to end, and asked questions like why did you use a particular database, why this Python framework, why did you use a message queue instead for handling messages through the database, etc. He asked me the major challenges I had faced during the project and their resolution. He also asked me a couple of questions on Microservices Architecture, because that is what my project was based on. This carried on for roughly 20 minutes.

- Then the interviewer asked me that since most of my projects were written in Python, why have I chosen C++ as my preferred language for programming.
- I was asked to code two Linked List problems - Deleting a node given its position from the start and splitting a linked list into two parts. The questions were fairly simple and the interviewer's motive to check my speed and accuracy while coding.
- The interviewer would deliberately point out an error in your code even if the code is correct. This was just to judge how you defend yourself.

- **Technical Round 3**
  - This started with the interviewer asking for a detailed background of me, as in family, bachelors, work experience and then masters.
  - He asked my one of my hobbies and we casually chatted on that for about 5 minutes.
  - Then I was asked to explain my company project in detail, since I had work experience prior to joining BITS. He wanted to know my team structure, company ethos, my role in my team, challenges which I had faced, difficult bugs I had solved and important features which I developed. This was a thorough scan.
  - I was then asked to explain the rationale behind opting for Masters at BITS and how I have enjoyed the experience so far. He also told me to explain through a concrete example of what change do I see in myself having been doing Masters at BITS, as in some particular thing which I had learnt here.
  - He also asked me to explain my decision to opt for a job in software development after bachelors in Electronics and Communication.

- **HR Round**
  - This was a short round, which started off with the usual introduction.
  - Then the HR asked me to explain one of my qualities which I hadn't mentioned on my resume.
  - Question related to Strengths and Weaknesses.

- The HR gave me some information about what all extra curricular activities happen at Cisco, and also about the Cisco campus.
- I was finally asked whether I would be comfortable relocating to Bangalore, to which I replied yes.

Sources of Preparation

- GeeksforGeeks
- GATE study material.

Courses and Certification

OS, DBMS, CN, DS, Algo

Other Relevant Information

I found that asking a meaningful question to the interviewer at the end of each round puts a good impression. So make sure to do that. Also, being clear about each and every point on your resume, is very important, as you could be asked to defend anything.

Sector: IT

Name: Ashish Thakrar (2017H1030123P)

Company: Cisco Systems India Pvt. Ltd. Bangalore

Profile: Software Engineer

Recruitment Procedure : Online test followed by Technical, Managerial and HR interviews.

1. Written Test (Online on HackerRank)
   - CGPA cut-off 7.0

- Test had 50 questions – to be solved in an hour. Test consisted questions on Basics of C , DS and Algo, Quant (Probability etc.), puzzles, all mcqs, no

  negative marking. Try to solve as many as you can, so manage time efficiently and don't be hung up on questions that seem to take more time.

2. Technical Interview (2 or 3 rounds)

   - Shortlisted students were asked to come to PU office by 9 in the morning.

   - The first interview lasted for more than an hour, started off by asking about my projects, as it included machine learning he asked to explain some machine learning algorithms and basics.

   - Then moved to questions of bit manipulation, java, basic data structures, operating systems. A lot of questions were asked so I don't clearly remember each one of them. But most questions were pretty basic and the interviewer was helpful.

   - I had expected a lot of questions on computer networks, but surprisingly wasn't asked anything from that.

   - In the second round projects were briefly touched upon and some moderate to difficult questions were asked from operating systems concepts and computer architecture.

   - He was expecting hardware related knowledge, which I told him something I'm not good at, so he asked me about projects again and this round was not very long, hardly 25 mins to half an hour.

3. Managerial Round

   - They asked about how I liked the PPT and what interested me the most in the PPT, what do I know about cisco, standard questions.

   - Asked why cisco, why should we hire you.

   - Asked about music interests, don't say things just for sake of saying, they will find out if you're bluffing to impress, just be honest.

- Asked what I thought about myself, do I see myself as in introvert person or an extrovert one, and why , how would that help me or be a problem in my way
- Strengths , weaknesses etc.
- Asked if I was given 10 million dollar by cisco what start-up idea would I go for, and had a long, confusing and frankly, very uncomfortable discussion over it.

4. HR

- Some other company's test was about to start so they had only 5 mins to HR so wasn't asked much, it was suspiciously brief.
- Started off by asking location preferences, asked if I was fine with moving to Bangalore.
- Strengths, weaknesses, one thing I'd like to change about myself.
- What was the thing I found most interesting in the PPT, what all did I not know before PPT about CISCO.

Sources of Preparation

- Geeks for geeks (For DS AND ALGO as well as GATE Syllabus : CN, DBMS, OS) (Mostly gate stuff and must do coding questions)
- Interview Bit (A few coding questions now and then)
- DS & ALGO MADE EASY by N Karumanchi (Mostly devoted my time to this)
- Initial tips from CTCI book by G L McDowell (Just went through guidelines , didn't have to prepare for technical stuff from this book)

Other Relevant Information

- Prepare well, my preparation wasn't as good, luck favored me big time. Code and develop problem solving skills from the beginning, at least devote three full months prior to commencement of the placement season.

- If you don't have a plan, start with the book I mentioned, practice geeks for geeks and interview bit, must do coding questions, as the name itself says are to be done without fail.
- DO NOT FAIL to attend the PPT.
- Prepare about projects and prepare thoroughly so as to be able to defend anything that might come up while discussing them. Don't mention the projects you don't know inside out.
- Be honest in the interview.
- The process is long and very tiring, stay hydrated, keep some eatables on you at all times.
- Lastly, don't lose hope and wish you all the very best.

Sector: IT

Name: Harjas Singh Bathla (2015A7PS0106P)

Company: App Dynamics

Profile: Software Engineer I

Recruitment Procedure

- Coding Test, Technical Interviews, HR Interview
- The coding test had three coding questions and around 10 MCQs related to Computer Science. First two questions were easy, the third one was based on graphs and was confusing because of one of the example test cases given.
- There were three technical interviews. Each of these began with questions related to projects and internship mentioned on my resume and then some coding questions were asked.
- Round 1 : Given a family tree, I was asked to write code for finding the level of a particular person in it. The interviewer constantly asks about the algorithm, data structures being used.

- Round 2 : Given a tree, check if it is a binary search tree or not. After telling the approach, I was asked to write code for it. One other question was asked to find loop in a linked list.
- Round 3 : Given an Iterator interface, you have to design a class TreeIterator for binary trees.
- Then there was an interview with a manager and he asked me some general questions related to my expectations, interests. Also he gave me one puzzle to solve.
- HR Round : This was the final round. Questions asked were related to my previous internship experiences, why I wanted to work for this company, why not go for Masters etc.

Sources of Preparation

- InterviewBit for coding practice
- GeeksForGeeks for interview archives
- Course slides
- Cracking the Coding Interview

Courses and Certification

- Data Structures and Algorithms, Object Oriented Programming, Databases

Other Relevant Information

- Develop habit of writing code on paper because most of the companies ask for it during the interviews.
- Prepare talking points related to the projects and internships mentioned on your resume.

Sector: IT

Name: Aayushi Agrawal (2014B4A3809P)

Company: Amadeus Labs

Profile: Software Developer

Recruitment Procedure

- Online Test, Technical interviews, HR interview.
- Online Test-It was a one hour duration test with questions on general aptitude and logical reasoning.

Technical Interview I :

- ✔ First he asked me to introduce myself. Asked about the projects and internships and my areas of interest.
- ✔ Coding Problems- Given an array of integers, find the largest integer that can be made by using all the elements of the array. One easy question on string traversal and array manipulation.
- ✔ System Design-Design a parking lot system (in depth implementation using classes and oop concepts)
- ✔ OOP concepts, puzzles

Technical Interview II :

- ✔ Asked questions from my resume.
- ✔ Some theoretical questions on oop, OS, difference between interpreter and compiler.
- ✔ 3-4 Puzzles which were mostly standard puzzles from geeksforgeeks.

HR Round:

- ✔ Introduce yourself.
- ✔ Strengths and weakness, about my PORs.

- ✔ Asked me how you would handle certain situations (involving time management and pressure of work).
- ✔ About my family background and whether I would be comfortable in moving to Bangalore.

Sources of Preparation

Geeksforgeeks, interviewbit for coding and puzzles, oop and os slides, previous year archives.

Other Relevant Information

Stay calm during the interview. Don't hesitate if you don't know something, tell them confidently that you don't remember it. Be thorough with your resume and projects. Have a clear picture of what the company and profile is about and accordingly put questions to them when asked to do so. Placement process needs a lot of patience. Don't lose hope and stay positive.

Sector: IT

Name: Eapen Jose (2017H1030126P)

Company: Adobe

Profile: Member of Technical Staff

Recruitment Procedure

- Online Test ○ Aptitude test.
    - ○ Coding test: 3 questions. 1st question was based on basic array operations. 2nd question was based on graphs (shortest path) and the 3rd question was based on dynamic programming.
- Technical Round-1 ○ Few questions about projects.

- OOP concepts, OS – deadlock, compiler, linker, loader, process synchronization.
- Coding question – Removing adjacent duplicate alphabets from a string.

- Technical Round-2 ○ Projects: Use cases and implementation details.
  - Design: LRU cache, LFU cache. I was asked to write the full code on a paper.
  - Coding: Print all possible words from phone digits (Link: https://www.geeksforgeeks.org/find-possible-words-phone-digits/)
  - Questions on Memory management.
- Technical Round-3
  - Coding
    - Add two numbers without using addition operator.
    - Given a sorted dictionary of an alien language, find order of characters.(Link: https://www.geeksforgeeks.org/givenhttps://www.geeksforgeeks.org/given-sorted-dictionary-find-precedence-characters/sorted-dictionary-find-precedence-characters/) .
  - Some HR questions: why adobe, why M. Tech.
- HR Round ○ There were 2 HR rounds.
  - Usual HR stuff like
    - Introduction.
    - Strengths and weaknesses.
    - Where I see myself in 5 years.
    - Why should Adobe hire me and why Adobe.

- What all companies I sat for before this interview and the companies I will be sitting for today.
- Describe a time when you made a mistake.
- Explain a situation when you explained a complex idea simply.
- Describe a time when you delegated tasks to team-mates.

Sources of Preparation

- Geek for geeks: There is a section called Must do coding questions (Link: https://www.geeksforgeeks.org/must-do-coding-questions-for-companieshttps://www.geeksforgeeks.org/must-do-coding-questions-for-companies-like-amazon-microsoft-adobe/like-amazon-microsoft-adobe/) . Practice all the questions at least once. All most all companies ask questions directly from this.
- InterviewBits
- HR: Tutorial Point (Link: https://www.tutorialspoint.com/hr_interview_questions/quick_guide.htm)

Courses and Certification

These courses are absolute must to know [for all companies in general] -

- Data Structures and Algorithms
- Object Oriented Programming
- Operating Systems
- Database Systems
- Computer Networks

Other Relevant Information

- Mostly programming questions are asked from graphs and dynamic programming.
- Revise the courses well as good programmers tend to be differentiated using theory and design.
- Do prepare your resume.

Sector: IT/Operations

Name: Siddharth Shankar Tripathi , 2014B2A30365P

Company: Flipkart

Profile: Associate Product Manager - 1

Recruitment Procedure :

1) Presentation (6 slides) outlining a problem with a product, your solution for the problem, metrics to measure the effectiveness of the solution and the reasons why your solution might fail.
2) Case interview (Involved 2 guesstimates and 1 business case)
3) Product Development Interview
4) Technical Interview revolving around a service to be built for Flipkart.
5) Case Interview (Business case for a tech product you like)
6) Discussion on your submitted presentation. Why the ppt. + 1 problem to be solved.
7) Offer

Sources of Preparation :

1) Cracking the PM interview : Gayle Laakmann, Jackie Bavaro

2) Decode and Conquer : Lewis C Lin

3) Case in Point : Marc P Consentino

Courses and Certification

Neural Net and Fuzzy Logic, Object Oriented Programming, Data structures and Algorithms

Other Relevant Information

Interviewers are looking for structured thought process, customer empathy and good business sense. A lot of preparation for tech is not required but will certainly be helpful. Data points like the number of active users of flipkart, urban population, rural population, non-users of internet, close competitors and their influence on Flipkart will be helpful. Solve a lot of cases and keep your solutions user friendly. A know-how of basic costs of using cloud, computational costs of data with flipkart will be helpful.

Sector: ET

Name: Moksha Shah (2017H1240097P)

Company: Mediatek

Profile: Protocol Stack Engineer

Recruitment Procedure

- Online Test: It consisted of 4 sections (No negative marking)
    1. Aptitude (6 questions -10 min) - Moderate questions on time work, mixtures, Data interpretation. You cannot switch between sections or return back to previous section so time maintenance is important
    2. C Programming (18 questions-30 min) – Moderate level error, output, time complexity of searching and sorting
    3. Engineering basics (12 questions- 20 min) – Included theoretical questions on digital circuits, data structures, MOSFET basics, microprocessor etc.

4. Communication/ VLSI Hardware (Choose any one, 18 questions-30 min) - For communication section, refer ADC and MPC notes. All basic questions on modulation schemes, OFDM, diversity, fading etc

- Technical interview: One hour long interview on projects, communication concepts and C programming.
- It started with basic introduction and areas of interest in wireless communication and latest technologies like 4G, 5G. Around 30 minute discussion on OFDM (PAPR, disadvantages, zero padding), MIMO, Alamouti, CDMA v/s TDMA, Small scale and large scale fading, diversity, some real time problems, digital communication (GATE)
- C-programming- Program to find if a number is power of 2, Bit wise operations, static functions, storage classes, macros v/s functions, inline functions (Refer Let us C by yashwant kanetkar to cover all basics)
- HR interview: Introduction, about the company, Very informal interview based on location preference, future plans.

Sources of Preparation

- Mobile and personal communication- Rappaport
- Advanced digital communication- ADC notes, online videos on latest wireless LTE protocols
- C- Let us C, Indiabix, GeeksforGeeks

Courses and Certification

Mobile personal communication, Advanced digital communication

Other Relevant Information

The interview difficulty level will change based on questions answered starting from easy. Be calm and confident with answers and brush up basics as you will be evaluated based on that.

Sector: ET

Name: ABHISHEK SHARMA (2017H1230209P)

Company: Intel

Profile: SoC Design Engineer

Recruitment Procedure

Interviews were based on resume shortlisting.

- Interviewer asked me to elaborately describe my projects, then basic questions on STA, Dynamic power, (Dynamic voltage frequency scaling) DVFS, some questions on CAD for IC Design related to low power design.

Sources of Preparation

Aptitude and Reasoning from RS Agarwal. 'C' from "Let us C" and Geeksforgeeks.com

Rabaey for CMOS Digital Design, Topics like Static Timing Analysis from vlsiexpert.com, CAD and Physical Design basics from lectures by Prof. Sen Gupta(NPTEL-IIT, KGP)

Courses and Certification

Reconfigurable Computing, VLSI Architecture

Other Relevant Information

Be thorough with your projects. Should know every little detail. Keep less projects (4-5) in your resume but you should know everything related to them.

Sector: ET

Name: Raveesh Garg (2015A8PS0337P)

Company: Intel

Profile: SoC Design Engineer

Recruitment Procedure :

The procedure consisted of Resume shortlisting and Interviews. Some people had 1 technical and 1 HR interview, later some people had 2 Technical and 1 HR. I had only 2 technical interviews and no HR.

Technical 1 – I was asked to introduce myself and mention my areas of interest. I had mentioned Digital Design and Computer Architecture. I was asked differences between CISC and RISC processor, there were some general questions from Digital Design like simplifying a Boolean function, implementing one flip flop from another, questions on Static Timing Analysis. I was also asked to make a state machine for a sequence detector and was asked which type of state machine have you made (mealy or moore). I was asked to explain my project which I had done during my summer Internship at DRDO. Good understanding of Digital Design and projects was sufficient.

Technical 2 – Again I was asked to introduce myself and mention my interests. I was asked some basic questions from digital design like differences between latches and flip flops, implementation of some function etc. This interviewer also focused on ADVD, I was asked to draw XOR gate and NAND gate using static CMOS and pseudo NMOS respectively. There were some questions from STA. Then I was asked to explain VTC (Voltage Transfer Characteristics) and CTC (Current Transfer Characteristics) of static CMOS inverter. Try to be intuitive rather than mathematical while explaining. I was also asked some basic questions from analog like Band Pass Filter, difference amplifier using op-amps, effective time constant of an RC circuit. I was also asked to explain my 3-2 DOP in detail. In the end, I was asked to state preferred role out of – RTL Design, Logic verification, Physical Design and Analog Design. I chose RTL Design. Good understanding of Digital Design, ADVD, projects and basics of Analog Electronics were sufficient.

Sources of Preparation

- Please keep your concepts clear as you progress through your courses. Work on the course in which you have difficulty during 3-2 itself. Last minute learning will never help you. My case was similar when it came to Analog and I eventually left half of it. Be thorough with C (Qualcomm). Knowledge of CP is sufficient.
- Your text books (or even lecture slides) are sufficient. Be thorough with every course and project on your resume. Extra knowledge of your courses of interest is always a plus point.
- For other companies, you can practice aptitude from Indiabix. Questions will be simple but speed matters.

Courses and Certification

- For Intel – Good knowledge of Digital Design and ADVD-Digital is must. Computer Architecture is a plus point. Basics of Analog Electronics and Microelectronic Circuits are necessary.
- Generally- For some other companies like TI and Samsung, both Analog and Digital were asked in the written test. Extremely poor knowledge of one section leads to rejection in the test itself. For example, if your area is Digital, then sound knowledge of Digital and decent knowledge of Analog is required. So, spend some time preparing the other section as well.
- To summarize – Digital Design, ADVD, Analog Electronics, Computer Architecture, microelectronics.

Other Relevant Information

- You should clearly state your area of interest to the interviewer. For example, Intel has a role for you even if you are interested in Electronic Devices or Analog Electronics.
- More projects on your resume is beneficial but only if you are thorough with each one of them. One internship and 3-4 projects are sufficient.
- Try to prepare your intro or answers to general questions in advance.

Sector: ET

Name: Monika Vijay (2017H1400159P)

Company: Intel

Profile: Tech SYS Arch & Client Group

Recruitment Procedure

There was direct resume shortlisting, and after that only one technical round and then HR.

In technical round questions were from RISC project and RP, and others from basics of VLSI, CMOS (VTC curve was one of que), Op-amp (LPF & all pass filter), SRAM working (as I have done a project on this), definition of hold time and setup time etc.

Sources of Preparation

Follow Kang or Gurunarayan sir lecture, Rambey(few chapters only), STA- VLSI-Expert, vlsineda

Courses and Certification

For hardware profile you must have gone through VLSI design, VLSI architecture Course, Verilog

Other Relevant Information

Aptitude Test score matters a lot so don't ignore it and don't make a mistake to give more importance to technical section while attempting question paper, if you are confident enough in technical that you can score highest then only you can thinking of scoring less in aptitude would compensate.

Sector: ET

Name: Aniruddha Paturkar (2017H1240115P)
Company: Intel
Profile: SoC Design Engineer

Recruitment Procedure

- Resume Shortlisting, Technical Interviews, HR.
- Resume was shortlisted based on CGPA and technical skills.
- Based on performance in the first Technical Interview, a candidate may get rejected, selected for HR round, or may be sent for another round of Technical Interview.
- All the questions asked in Technical Interview(s) were based mainly on the technical skills mentioned in the resume.
- Technical Interview Questions:
    a. Introduce yourself. (Emphasize on those things that aren't already mentioned in your resume.)

b. Explain the projects you have done in VLSI Design.

c. What is the difference between a Latch and a Flip-Flop? Construct a D-Latch using any logic of your choice and convert it into a D-FlipFlop.

d. State the differences between SR-Flip-Flop and JK-Flip-Flop.

e. Besides 'Design Rule Checks' and 'Layout vs Schematic Check', what are the things one should take care of while designing MOS Physical Layouts?

f. What are 'Setup' and 'Hold' time violations? Draw their timing diagrams.

g. What is an 'All pass' filter? Explain and state the differences between 'Low Pass', 'High Pass' and 'Band Pass' filters.

h. Explain 'Op-Amp' in short.

i. Explain 'Phase Locked Loop' and 'Voltage Controlled Oscillator'.

- HR round was mainly focused on knowing my preferred field of work.

Sources of Preparation

CMOS Digital Integrated Circuits' by Kang and Leblebici; 'Digital Integrated Circuits – A design perspective' by Rabey; 'CMOS VLSI Design' by Weste and Harris; 'Fundamentals of Digital Circuits' by Anand Kumar; 'RF Microelectronics' by Behzad Razavi; www.vlsihttp://www.vlsi-expert.com/expert.com; 'Verilog HDL' by Samir Palnitkar; 'Digital System Design with VHDL' by Roth.

Courses and Certification

The requisite course was VLSI Design. Knowledge of any Hardware Description Language was a plus.

Other Relevant Information

Know all you write on your resume. Focus on basic concepts rather than derivations. Interviewer is more interested in the approach the interviewee adopts. Project related questions are the most crucial ones that the interviewee must be able to answer very precisely. A decent amount of depth in your projects is a must.

Sector: ET

Name: Dhruva Devasthale (2015A3PS0172P)

Company: Intel India

Profile: SOC Design Engineer

Recruitment Procedure

- Resume shortlisting, Technical Interview, HR.
- The technical interview consisted mainly of two types of questions:
    1. ***Digital Design problems***: Design problems based on counters, flip flops, cache, microprocessors. These questions were lengthy, but not very complex. Think for a minute or two max. and start with a methodical approach even if you think you don't know the solution. As you discuss different approaches, the interviewer will also start helping you move forward and get to the answer. Don't fall silent, keep yourselves vocal, discussing the solution. How fast you get to the solution is not as important as your approach(es).
    2. ***Concepts*:** Questions from ADVD – Digital part, Analog Electronics, MOS/ BJT basics, Computer Architecture. They want to check whether you have some knowledge about these topics.
- HR round is easy. General questions like:
    1. Why not MS?
    2. Why Intel?
    3. How are you liking the interview experience?

Sources of Preparation

Digital Design – Morris Mano, ADVD – Rabaey, AnE – L.K. Maheshwari. Lecture slides and course books will be enough for basics of all topics.

Solve GATE problems for practice.

Courses and Certification

In depth knowledge of Digital Design, Analog Electronics and Microprocessors and Interfacing.

Computer Architecture will be a plus.

Know your projects in and out. You should be proficient in the topics on which your projects are based.

Other Relevant Information

In general, all interviewers will first ask your interests and favourite topics before asking the questions.

Know your strong point and then be confident as you try to approach the solutions. The interviewer might get a bit impatient if you are slow initially but as you go ahead answering questions, it will get better.

If you don't know any concept, clearly say so. Giving a wrong answer confidently might be harmful.

Sector: ET

Name: Arush Shrivastava (2017H1230228P)

Company: Intel

Profile: SoC Design Engineer

Recruitment Procedure

- Resume Shortlisting, Technical Interview, HR
- **Resume Shortlisting:** Students with a CGPA greater than 8 were shortlisted for the interview process.

- **Interview Questions:**
    - Related to projects: The interviewer went through each project and asked about the same. The prime objective was to understand the reason of choosing the project and the learning outcome of the project. Follow-up questions related to what you mention while explaining your projects.
    - Related to static timing analysis: Basic questions related to setup hold time requirements.
    - Basic Digital Circuits Questions: Questions from this part were rather difficult where input and output waveform were given and asked to design the circuit for it. They were more concerned with the thought process and how do we approach to a new problem when related to it. Some flip-flop designs and their conversions along with their circuit level diagrams.
    - Verilog related Questions: Basic simple structural modelling questions where I was asked to code for a ripple carry adder and some other easy coding and synthesis related questions.
- **HR:** The kind of profile I wanted to work in: RTL Design, Analog, Physical Verification, Validation, Physical Design.

Sources of Preparation

VLSI Design books: Both Kang and Rabaey, VLSI Architectures, Physical Design NPTEL Videos, CAD for IC Design, STA from VLSI expert.

Courses and Certification

VLSI Design, VLSI Architectures, Digital Circuits and STA analysis should be sufficient. And if you're looking for a profile under Physical Design, CAD for IC Design as well.

Other Relevant Information

They were seeking for reasons to accept us, not to reject. You need to able to convince the recruiter for the same. Get a good hold on the projects you did; a brief study and some confidence should do just fine. Do not try answering the questions you have no idea about. Know the specific profiles you are interested in and justify why this is the profile you want yourself to be working.

Sector: ET

Name: VANYA GUPTA(2017H1230225P)

Company: INTEL

Profile: SOC Engineer

Recruitment Procedure

- Resume Shortlisting .Technical Interview ,HR according to skills and project done.
- Interview Questions

a. Interviewer asked me to rate myself in Verilog . After that he followed up with questions on Verilog related to use of synchronous and asynchronous reset , difference in using blocking and non-blocking statements within always block. You have to be very thorough with concept of blocking and non-blocking concept. Then he asked me to write both Moore and mealy based FSM (both overlapping and non-overlapping sequence).

b. Then in Static Timing Analysis(STA) expressions for setup time and hold time and there significance were been asked. Have a thorough study of STA.

c. Then he asked about projects. He was more leaned towards Digital Projects. So its better to highlight Digital projects towards INTEL. Then follow up questions from your explanations. You have to be very thorough with your projects you mention in your RESUME.

d. Finally he asked me my Interests in semiconductor Industry.

Sources of Preparation

CMOS Digital integrated circuits :

Sung Mo kang , Yusuf Leblebici, eblebici, Chulwoo Chulwoo Kim. Kim.

Gate level Digital Electronics , Analog Electronics and Network System (RC networks mainly) .

STA from http://www.vlsi-expert.com/ http://www.vlsi

Go through all concepts oncepts related related to to setup setup time , hold time , skew ,jitter.

For aptitude and C https://www.indiabix.com/

Courses and Certification

VLSI Design , VLSI Architectures

Other Relevant Information

First and foremost thing you have to be very CONFIDENT . Things are not at all difficult .Stay Cool during Interview. Prepare Resume well and be thorough with whatever you mention in your Resume. As for intel be very thorough VLSI concepts , some concepts from CAD for IC Design and VLSI Architectures.

Sector: ET

Name: Abhimanyu Kakkar

Company: Intel

Profile: SoC Engineer

Recruitment Procedure

- Resume Shortlisting
- Technical interview : Questions based on the projects mentioned in the resume were asked so you must know each and every detail of your projects. Apart from that, following questions were asked:
    i. Verilog code for the design of flip flops with synchronous and asynchronous reset and clear.

ii. Design of overlapping and non-overlapping sequence detector and its Verilog code.

iii. Setup and hold time definitions and how to calculate setup and hold violations (with and without skew and jitter).

iv. Ways to fix setup and hold violations in a design before and after chip has been sent for fabrication.

Sources of Preparation

i) For VLSI Design :
   (a) CMOS Digital integrated circuits : Sung Mo kang , Yusuf Leblebici, Chulwoo Kim.
   (b) Digital VLSI Design by Raebey ii) For STA : http://www.vlsi-expert.com/ (go through all the concepts related to setup time, hold time,clock skew, jitter, ways to fix setup and hold time violations)

Courses and Certification

VLSI Design, Digital Design, VLSI Architecture, CAD for IC design

Other Relevant Information

- You should be thorough with all the projects that are mentioned in your resume.
- Always start explaining your project by stating the objective of the project very clearly.
- Be confident and have a smile on your face during the interview.

Sector: ET

Name: Komal Gurjar (2017H1230207P)

Company: INTEL

Profile: SoC Engineer

Recruitment Procedure

1. Resume shortlisting.

2. One technical and one HR interview.

3. Interview questions :

- It started from the very basic question that is tell me about yourself. Prepare this well.

- Projects: my analog and digital both projects were asked thoroughly. Questions related to risc and cisc processors, tools that are mentioned in your CV. In short, be thorough with your CV.

- Digital design : questions about flip-flops, latches, race- around condition, realisation of jk, d and other flip-flops from the basic sr latch was asked too.

- Verilog : write a behavioural code to realise a full adder, blocking and nonblocking assignments, rtl level synthesis from the code written.

- Ic concepts : what is photolithography, etching and some other basic understanding of fabrication steps.

- Vlsi design : mosfet fabrication steps, questions related to threshold voltage , knowledge about short channel effects.

Sources of Preparation

Digital design : Morris mano

Vlsi design : rabaey and kang

Verilog : online websites

STA: vlsiexpert.com
Class notes for the 2 semesters covering subjects like cad for ic design, vlsi architecture.

Gate based questions from Morris mano

Courses and Certification

Vlsi design , cad for ic design, digital design, verilog language, vlsi architecture , analog ic design

Other Relevant Information

Be thorough with each and every word you write in your CV. Your CV is the syllabus for the interviewer to test you. Every person has their own methodology to prepare. Don't copy anybody else. Be confident. Interact with interviewer as much as possible. Work on your communication skills. Don’t get demotivated if you have low CGPA. It is just a criteria to sit in placements.

Have a smile when you greet interviewer for the first time. It’s not important to answer every question. They test your approach and concepts. That's all. All the best.

Sector: ET

Name: Hanu Aggarwal (2017H1230227P)

Company: INTEL

Profile: SOC Engineer

Recruitment Procedure

1.Resume Short listing based on CGPA.

2.Technical Interview:

- Questions were based on the projects mentioned in the resume.So you should know each and every detail of your projects.If you don't feel confident about any project,it's better not to mention that in your resume.

Apart from this,I was asked following questions:

a.Risc Processor and different types of hazards.

b.Inverter Transfer Characteristics and explanation of all the regions(saturation,linear and cut off)

c.Etching and types of etching.Why it is used in IC Fabrication?

d.Reduction of Boolean Function.

e.Active Low pass Filter(Using Opamp) and its transfer function and working as well.

f.Working of MOSFET and formation of depletion region.

g.FSM and types of FSM

h.Few Verilog codes.

3.No HR Round

Sources of Preparation:

1.Digital VLSI Design : Read Rabaey and Kang

2.http://www.vlsi-expert.com (for static timing analysis)

3.Digital Electronics by Morris Mano

4.Verilog:Samir Palnitkar(A very good command on this)

5.Gate material is also very important on digital electronics.

6.Design of Analog CMOS Integrated Circuits:Behzad Razavi(for Analog Profile)

Courses and Certification:

1.Digital VLSI Design

2.Analog IC Design(for Analog Profile)

3.VLSI Architecture

4.CAD for IC Design

Other Relevant Information:

Positive Attitude is very important.

You should be very good in your projects like Digital VLSI Design,RISC Processor.

Sector: ET

Name: Kunal Harbhajanka (2017H1230223P)

Company: Intel

Profile: SOC Engineer

Recruitment Procedure

Resume Shortlisting, Technical Interview, HR

- Technical Interview

  Q1. Tell me about SOC encounter project (CAD FOR IC DESIGN) what are steps to be done and what you learnt from it.

  Q2. Tell the difference between RISC and CISC Processor?

  Q3. Write the RTL code for the Stall circutary used in the designing of 4 stage pipeline of RISC processor

  Q4. Master slave JK flip-flop explain draw the circuit of it.

  Q5. Draw a Low pass filter using opamp and what is a differential amplifier

  Q6. Draw the doping profile of the ion implantation process.

- HR

  This was just a casual talk with the HR for about 3 minutes where she asked about preference in the profile.

Sources of Preparation

Subjects –

- VLSI design – Prepare thoroughly each concepts taught in class.
- VLSI Architecture – Learn about the projects done here and go through the RTL code.
- CAD for IC design – Just have the basic knowledge of the different steps of physical design.
- Analog IC design – If want to go for analog profile prepare subject in deep otherwise for digital brief revision in enough. ● Digital electronics gate level.

Timing analysis STA –

- Learn STA analysis from a blog - vlsiexpert

Other Relevant Information

Stay cool and confident during the whole process and for that you have to prepare your basic right because if you are prepared than only you will be confident enough to crack the interviews.

Sector: ET

Name: Shreyas Verma (2015A8PS0369P)

Company: Intel

Profile: Graphic Hardware Engineer

Recruitment Procedure

- Resume Shortlisting, tech interview, HR interview ● Tech Interview:
  a) Tech questions: Draw NAND/NOR implementation of SR latch, flipflop conversions (JK to T, etc), STA based questions, design specific circuits using NAND gates, simplify a given Boolean expression, explain an functioning of an inverter and its various operating regions
  b) Discussion on projects mentioned in resume, mainly Computer Architecture and ADVD projects.
- HR Interview: generic HR questions. What are your expectations? What profile are you looking for?, etc.

Sources of Preparation

Revise thoroughly: **Digital Design**, ADVD- digital section mainly, Computer Architecture.

Study STA online: http://www.vlsi-expert.com/2011/04/static-timing-analysis-sta-basicpart3a.html

Courses and Certification

DD, ADVD, Computer Architecture, Microprocessors

Other Relevant Information

Know your projects well; you will be grilled on them. Be calm and composed. Take your time for each question. Communicate unequivocally to the interviewer. The process is a cakewalk if you have a stronghold in digital electronics

Sector: ET

Name: Arkid Kalyan Bera (2015A3TS0271P)

Company: INTEL

Profile: SOC ENGINEER

Recruitment Procedure

- Resume shortlisting. No test.
- Technical Interview questions: (1 or 2 rounds):
    1. Questions on projects.
    2. Questions on Verilog (2-bit mux, synchronous and asynchronous dff using if-else and switch-case statements, blocking/non-blocking statements and race conditions on the use of blocking statements). Be thorough with the syntax of Verilog. If you are good at it, half of your job is done. Just revise Verilog thoroughly before the interview. Else, at least be clear with the syntax of C so that you can write some basic programs, if asked.
    3. The most important topic for a digital interview is **Static Timing Analysis**. This topic is generally not covered in courses in detail, but

asked in depth in digital interviews, both in Intel and Qualcomm. The best source for this topic is the vlsi expert blog. I have shared the link in the "sources of preparation" section.

4. Some other concepts related to power dissipation, delay, etc. Revise **ADVD and Digital Design** thoroughly.

5. Please keep interacting with the interviewer. Tell him your approach, that's an important part of your answer.

- HR interview was pretty easy for me. They might ask the preference number of Intel in the ET placement preference form. Be honest. When asked about MS, give a diplomatic answer. If you have plans, focus on the fact that your main reason for getting an MS is because you want to gain knowledge, and you would love to gain such knowledge from the senior employees of Intel as well. If no plans, don't sound unambitious. Focus on the fact that you to stay close to industry in order to understand its needs, and thus, you don't want to go for higher studies, but gain knowledge at the same time in this fashion.

Sources of Preparation

Digital Design by Morris Mano, Digital VLSI Design by Raebey, CMOS Digital Integrated circuits by Sung Mo Kang, Yusuf Leblebici, Chulwoo Kim. http://www.vlsi-expert.com/2011/03/static-timing-analysis-sta-basic-timing.html for STA.

Courses and Certification

Digital Design, ADVD, Computer Architecture (mainly for proficiency in Verilog)

Other Relevant Information

Be very chilled out during the interview. Only then will you be able to give your best. I am sure you will be prepared well for the interview, but you need to retain all your knowledge during the interview and present it effectively and efficiently. Do not worry if you are stuck. Please show your approach and interact with the interviewer. All the best!

Sector: ET

Name: Amit Bhatt (2017H1230216P)

Company: Intel

Profile: SOC Design Engineer

Recruitment Procedure

- Resume Shortlisting for direct interview (no written test).
- There were around 3 panels for technical interview.
- Technical interview Questions:
    - ➢ First question was tell me about yourself. (Just be cool and tell them about your background, strengths, skills etc.)
    - ➢ Then the interviewer asked about the projects you have done. (The interviewer also asked if you have done projects outside the courses or not; tell them it's for B.E people mainly)
    - ➢ Questions regarding STA were asked like setup and hold time etc.
    - ➢ Then the interviewer asked about the project (design of RISC processor).
    - ➢ Questions regarding SRAM were also asked.
    - ➢ As, I had done my Research practice on analog design, the interviewer asked me about OTAs and op-amps.
    - ➢ At last, he asked me about my interest (analog or digital).
- HR interview was also there, but it was just an interaction. Don't worry about this too much.

Sources of Preparation

Digital VLSI Design by Raebey, CMOS Digital integrated circuits: Sung Mo kang, Yusuf Leblebici, STA from www.vlsiexpert.com and vlsi architectures from Patterson book.

Courses and Certification

VLSI DESIGN, ANALOG IC DESIGN, CAD FOR IC

Other Relevant Information

Go through all the concepts related to VLSI Design and some concepts from CAD for IC Design. Projects should be prepared well.

Sector: ET

Name: Amit Bhatt (2017H1230216P)

Company: Intel

Profile: SOC Design Engineer

Recruitment Procedure

- Resume Shortlisting for direct interview (no written test).
- There were around 3 panels for technical interview.
- Technical interview Questions:
  - First question was tell me about yourself. (Just be cool and tell them about your background, strengths, skills etc.)
  - Then the interviewer asked about the projects you have done. (The interviewer also asked if you have done projects outside the courses or not; tell them it's for B.E people mainly)
  - Questions regarding STA were asked like setup and hold time etc.
  - Then the interviewer asked about the project (design of RISC processor).
  - Questions regarding SRAM were also asked.

- As, I had done my Research practice on analog design, the interviewer asked me about OTAs and op-amps.
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- HR interview was also there, but it was just an interaction. Don't worry about this too much.

Sources of Preparation

Digital VLSI Design by Raebey, CMOS Digital integrated circuits: Sung Mo kang, Yusuf Leblebici, STA from www.vlsiexpert.com and vlsi architectures from Patterson book.

Courses and Certification

VLSI DESIGN, ANALOG IC DESIGN, CAD FOR IC

Other Relevant Information

Go through all the concepts related to VLSI Design and some concepts from CAD for IC Design. Projects should be prepared well.

Sector: ET.

Name: Garima Singh (2017H1230205P)

Company: INTEL

Profile: SOC Engineer

Recruitment Procedure

- Resume Shortlisting
- Technical Interview
  a. There was a separate panel and only one technical round was there.
  b. They asked basic questions from almost every topic. The interview lasted for 30-40 mins.

c. I was asked questions from the following topics:

- Sequence detector FSM, XOR gate implementation using complementary CMOS, basic Verilog code (in my case they asked swapping of two variables with and without using third variable), how to multiply a no. by 33(by shifting and adding logic),odd and even parity detector, basic questions related to logic gate such as XOR/EXNOR(digital electronics).

d. They also asked questions related to various projects especially RISC architecture and hazards in pipeline architecture, RP related questions.

Sources of Preparation

Digital Design by Morris Mano, Digital VLSI design by Rabaey, for VLSI architecture lectures by Gurunarayan Sir, Verilog HDL by Samir Palnitkar.

Other Relevant Information

Go through all the concepts related to VLSI design and some concepts from CAD for IC design. Focus on Projects as many questions were asked from them especially research practice. Basic digital electronics concepts related to logic gates, latches and flip flop (online plenty of interview questions are available go through them related to digital electronics), for verilog code Samir Palnitkar is sufficient(focus on blocking and non blocking assignment its very common question they ask).

Sector: ET

Name: Husain Shoab Scentwala (2017H1030118P)

Company: Intel

Profile: SoC Engineer

Recruitment Procedure:

1. **Resume Shortlisting:** CGPA >= 7.0
2. **Technical Interview (45 mins - 1 hr) :**

- Introduction and my work experience: I worked with Cisco products in my previous company, hence I had a fair knowledge of Networking. So the interview proceeded with questions on CN.
- Questions on CN:
    - ICMP: types, applications, detailed working of PING.
    - IPv4: Header diagram, detailed routing of packet from source to destination.
    - NIC and its working.
- Questions on C language (primary focus was on bit manipulation):
    - Count number of set bits in the most efficient way.
    - Unset a set bit at k^{th} position.
    - Toggle the bit at k^{th} position.
    - Find element that appears once in an array where every other element appears twice.
    - Find element that appears once in an array where every other element appears thrice.

My interviewer was the head of Network Division. She seemed to be satisfied by my answers, as she introduced the details of the job profile and the work that will be assigned.

3. **HR Interview (15 mins) :**

I was summoned for HR interview right after my Technical Round.

Questions on:

- Schooling and Graduation.
- Follow up questions on the job profile that I was introduced to in the Technical Round. She wanted to know if I was interested with the work, to which I happily agreed (The job profile required candidates who were interested in System - level development, rather than Application - level development).
- Any new innovations that I know about Intel. I was lucky there as I read about the latest and the fastest Supercomputer built on Intel processors, a night before the interview call.

The results were announced on the same evening. **Sources of Preparation:**

- **GeeksForGeeks:**
  For Coding rounds, Aptitude MCQ rounds, Programming Languages (C, Java, Python) and subjects- Data Structures and Algorithms, Operating Systems, Databases.
- **InterviewBit:**
  For Coding rounds, System Design questions.
- **GATE Notes:**
  For subjects.

Courses and Certification:

- Cisco Certified Network Associate (CCNA)
- ITILv2.0 Certification

Other Relevant Information:

Don't neglect GATE subjects revision and aptitude preparation while preparing for Coding rounds as they are important as well. Manage time properly as per your strengths and weaknesses as roughly 60-75 days will be in hand.

Sector: ET

Name: Nikhil M (2017H1240100P)

Company: Intel

Profile: SoC Engineer

Recruitment Procedure

- Resume Shortlisting -> Technical Interview -> HR.
- Resume Shortlisting was based on the Technical Skills.

- Technical Interview mainly focused on the Internship which was done during my B.E. and few technical questions from Digital Electronics and HDL's.
- Technical Interview Questions:
    a. Introduce yourself. (Expressed my interest towards Digital Profile as I was from Communication Engineering)
    b. Explain the project you have done in your Internship? (Many related questions followed up)
    c. Write a Verilog code for Synchronous Reset D-FF and what changes are required to make it Asynchronous?
    d. Difference between Blocking and Non-blocking assignments? Gave few Verilog codes related to these and asked me to find out their Output's. (You need to be thorough in this concept to answer these).
    e. Write an FSM for detecting the Sequence 1011 in either in Mealy or Moore?
    f. Explain Setup and Hold Time? Write their Expressions and find the Maximum operating frequency.
    g. Assume we already have the chip manufactured and we face Setup or Hold time violation. What can be done to make the chip functional?
- HR round was mainly for knowing the preference of field of work.

Sources of Preparation

"CMOS Digital Integrated Circuits" by Kang and Leblebici; "Digital Integrated Ciruits – A design perspective" by Jan M. Rabaey; "Verilog HDL" by Samir Palnitkar.

Static timing analysis is best explained in "www.vlsi-expert.com"

Courses and Certification

Digital Logic Design and Verification, VLSI, HDL

Other Relevant Information

Interview will be easy, just focus on the basic concepts and be thorough with your projects. Try to prepare your Resume as per the requirement of the company by highlighting the projects related to those fields.

Sector: ET

Name: Vinita Tahiliani (2017H1120236P)

Company: Intel

Profile: SOC Engineer.(Data center group)

Recruitment Procedure:

- Resume shortlisting Criteria CGPA>7, Technical Interview, HR.

Based on our resume they shortlist us for either of the following groups :

a. Server Development group

b. Data Centre group

The interview was 50-55 minutes long which started off with discussion at length of my resume. I was asked to explain the projects that the interviewer pointed to. Questions about what did you learn, problems faced etc will be very common when the projects will be discussed. This was followed by a thorough scan of my resume and discussion about every word. Even the technical proficiency was tested and discussed.

Questions:

a) C programming questions: memory leak, macros, inline, struct padding.

b) Basic Data structure, searching and sorting questions-Tree, Heap, Map.

c) OS, OOP and CN questions.

C questions:

Questions on pointers, code for 2D matrix using pointers, and some other code snippet based questions. How code is compiled in C, with all the details about their stages. (Preprocessing, Linking, Loading, Assembly language code, Machine code, etc.)

OS questions:

The concept of threads - what resources do threads share amongst themselves and what they don't share?

Race Condition, user and kernel modes, virtual memory management and paging

HR :

Basic HR question just 5 minute of interview and was awaited for the results.

Sources of Preparation:

- Gate Study material available online.

- Reports of all the projects that we did.

GeeksforGeeks, InterviewBit, Articles and interview experiences from these websites. Be comfortable with Hackerearth and Hackerrank Platform.

Courses and Certification

Data structure and algorithm, Operating Systems, Database Systems, Object Oriented Programming and Computer Networks.

Other Relevant Information

Panel is helpful and try to ask clues if you get stuck. For software profile C is must.

Sector: ET

Name: Yogendra Pratap Singh (2017H1230210P)

Company: Cypress Semiconductors

Profile: Design Engineer

Recruitment Procedure: Resume Shortlisting, Two Technical Interviews and One HR Interview.

- Round 1: (Skype interview of about 1 hr)

Interview started with basic questions on digital electronics, and after that questions on STA and Verilog (to write code of D-FF).

Then he asked some questions related to MOSFET and its structure explanation and then asked question related to Analog IC Design (single stage amplifier, differential two stage amplifier and its ICMR etc.)

And again asked some questions on digital (one hot encoding and why to use and where to use to gray code and why)

- Round 2: (Skype interview of about 30 min)

  Questions related to RISC project and Verilog (about assign statement, delay using #, blocking and non-blocking)

Sources of Preparation:

Kang, Rabaey for Digital Design and MOSFET. STA from vlsiexpert.
Razavi for Analog. RISC(slides).

Other Relevant Information

Prepare your projects well. And also study design flow will be helpful in some other interview.

Try not to be incorrect and confident while answering.

Don't take Aptitude lightly.

Sector: ET

Name: Shreshthi Yadav(2017H1240112P)

Company: Cypress Semiconductor

Profile: Sr Systems Engineer

Recruitment Procedure :

- Resume short listing (abv 8 cgpa), 2 technical interview, HR
- Basically the interview was rigorous and of one hour each. They ask questions from every possible domain. Firstly one should be very thorough with their

projects listed in ones resume. They can ask anything related. In my first interview they ask me about my ADSP project which was related to adaptive algorithm. If possible go through few matlab functions that one has used in their projects. Then they shifted their domain to FIR and IIR filters and their realization (eg: how one can realize linear phase filters from IIR?, chebychev and Butterworth approximations). Other topics are:

- Signal processing: they will ask mostly conceptual question (do study decimation and interpolation related questions).
- DSP: FFT and DTFT.
- Coding Theory: source and channel coding, turbo codes, convolutional codes.
- Few MATLAB predefined functions related to matrix algebra (eigen value, eigen vector and its importance)
- Basics of C (static variable and functions, global variable and its initialisations)
- MPC and ADC (full lecture notes, they have asked almost everything, most important OFDM, how a callis established, small scale and large scale fading) ● Skip antenna and RF microwave theory and projects.

Sources of Preparation

- ADC: Sainath Sir lecture slides
- MPC: rappaport
- C : let us C by yashwant
- DSP and filters: youtube lectures or Gates notes

Courses and Certification

No subjects as such.

Other Relevant Information

Be confident and positive. Keep smiling as attitude do matter a lot.

Sector: ET

Name: Ashutosh Dixit (2017H1240102P)

Company: Cypress Semiconductors

Profile: Wireless System Engineer

Recruitment Procedure

The shortlist was done on the basis of CGPA(8).

Round 1

(1) The first round was mainly based towards the wireless profile which they initially came with.

- The questions were mostly project based.
- The first project was based on advanced digital signal processing titled Blind channel equalisation so the questions were -
- Why channel equalisation
- What is blind channel equalisation
- Advantages of Blind Channel equalisation
- How to decide the tap length in equalisation ie the effect of coherence time and coherence bandwidth on it.
- Algorithms used such as LMS,CMA their description, their general equations and what do you mean by error performance curve.

(2) The second project was wireless communication so main questions were directed towards it such as-

- What is cooperative communication ● The equations involved in it.
- Different types of cooperative communication

(3) Other Questions

- What is MIMO
- What is transmit diversity,receiver diversity.

- Maximal Ratio Combining its SNR improvement derivation
- Alamouti Scheme-both 2x1 and 2x2 and whether it can be extended to more no of antennas
- Difference between miltiplexing gain and diversity gain.Calculate for Alamouti 1x2,alamouti 2x2,normal MIMO-2X2.
- Concept of cellular technology such as cell concept,TDMA,CDMA,FDMA.
- Shadowing,outage probability
- Doppler shift and coherence time and its importance in system design ●

  Coherence Bandwidth and delay spread.

Round 2

This round was an extension of the first round but this was towards the DSP profile.

The main questions were-

- Representation of digital domain in terms of analog domain and some numerical questions based on that.
- Upsampling and downsampling
- Difference between IIR and FIR filters ● Design of Digital filters.
- Basics of DFT.
- FFT Algorithms such as radix 2 butterfly algos
- OFDM transmitter and receiver block diagrams and questions based on that for eg- such as increasing the No of subcarriers and its effect on bit rate.
- Basics of C programming which were tested using giving code snippets of the codes and telling the correct outputs. **Round 3**
- The third and final round was HR round which included-
- Why Cypress
- Where do you see yourself in this company after 5 years

- Why do you prefer wireless profile over DSP profile
- Strengths,weaknesses

Sources of Preparation

- For Wireless Communication refer to Andrea Goldsmith,Tse n Vishwanath,Sainath Sir's Slides n Class notes.
- For Mobile communication refer to Rappaport n Chaubey sir's class notes
- For C programming refer to Let us C by yashwant kannitkar and indiabix site for c questions.
- For DSP refer to books by proakis and oppenheim.
- For ADSP refer to Simon haykin book and J Farhgang book

Courses and Certification No
as such.

Other Relevant Information

Though the interviews are profile specific but if you are focused in getting a job in the core sector be it wireless profile and DSP profile then the above questions should be prepared.

Sector: ET

Name: Harry Johnson (2017H1030120P)

Company: SanDisk (Western Digital)

Profile: Senior Engineer

Recruitment Procedure Test:

This was an online MCQ based test. There were 5 sections to it which were Aptitude, C, Analog Design, Digital Design and one other electronic subject. We were asked to attempt any three sections. Aptitude section was mandatory. I attempted C and a bit of digital design along with aptitude. Most of us got shortlisted for the interviews **Interview:**

There were 2 main rounds and 1 HR round. The HR round was just a formality. First round was purely technical. Almost all the questions were based on C, OS and Computer Architecture. You should know C thoroughly to crack this round. Good knowledge on computer memory, architecture, scheduling and pointers are required. This round lasted for more than 1 hour.

Second round was a mix of Technical and HR. This was short round, took only about 20-30 mins. He asked me about Raspberry Pi, Firmware, Embedded systems and few HR questions like Why SanDisk? Why Embedded system domain? etc.

Third round was an HR round. Only some Basic HR questions were asked.

Sources of Preparation

- Geeks for Geeks : Please do this Must do coding Questions at least 2 times. https://www.geeksforgeeks.org/must-do-coding-questions-for-companies-likehttps://www.geeksforgeeks.org/must-do-coding-questions-for-companies-like-amazon-microsoft-adobe/amazon-microsoft-adobe/
- Gate Notes : This helped in preparing OS and Computer Architecture. (Any book on this will be fine)
- C : To get your C game strong , please attempt as many C quizzes as possible from the internet.

Courses and Certification

None

Other Relevant Information

If you have anything related to Embedded Systems please put that in your Resume. I had taken Software for Embedded Systems as elective in the Second Sem and there was also a project in it. So, this worked in my favor

Sector: ET

Name: Sai Krishna Vallury (2017H1240099P)

Company: Western Digital Sandisk

Profile: Analog Design Engineer

Recruitment Procedure

- Online Test, 2 - Technical Rounds, HR Round
- Online Test had 4 sections: 70 Questions in 60 minutes
    a. Analog (20 Questions)
    b. Digital (20 Questions)
    c. Aptitude (10 Questions)
    d. C - Programming (20 Questions)
- Online Test was moderate. Three Sections are considered for selection (Aptitude section is compulsory). I attempted analog, digital and aptitude sections. Accuracy is very important. Going back to previous questions is allowed.
- Online Test Questions:
    a. Analog: Questions on RC Circuits, Opamp, Bode plots, Filters, Opamp+RC Circuits, Virtual ground concept, comparators, Pole-zeroes, RLC circuit.
    b. Digital: Analysis of Digital Circuits, K-Maps, Counters, Registers, etc..,
    c. Aptitude: Easy. But Time consuming.
- Technical Round 1: Questions on RC Circuits, Basics of MOSFETs, Current mirror, Ideal and Non-ideal Opamp circuits, Opamp+RC Circuits, One question was about the basic circuit of an opamp and it's working and why the opamp saturates, circuit consisting of a switch and 3 capacitors having initial voltages and asked me to find the final voltage across each capacitor, Question on Superposition theorem, Thevenin's theorem. Question on CMOS inverter. Questions from the online test were asked in this round.
- Technical Round 2: Again questions on RC circuits, Cascaded RC circuit, LC circuit. Questions on location of Pole-Zeroes for different responses such as underdamped, overdamped, critically damped. Intuitive analysis is extremely important; you must be able to calculate poles and zeros without any

mathematical calculations (at least for first and second order RC circuits). Bode plots, zeros and poles on S-plane analysis and their physical understanding is important. Question on common drain amplifier. Question on Miller's theorem. Question on Differential amplifiers using MOS transistors and last question on Two-Stage miller compensated opamp using pmos active load.

- HR Round: Standard HR questions for about 15 min.

Sources of Preparation

- Bode plots, Frequency response and Time-Domain analysis from Control Systems.
- Proper understanding of Second Order System Characteristics
- Differential Amplifier
- Analysis using small signal circuit equivalent of all the basic amplifiers - CS, CG, CD
- **Textbook References**:

a. Network Analysis/ Circuit Theory – Van Valkenburg, Hayt & Kemmerly

b. Control Systems Engineering – I.J. Nagrath and Kothari (Basics only)

c. Microelectronics – Sedra and Smith

d. Design of Analog CMOS Integrated Circuits – Razavi

e. Signals & Systems – Oppenheim

f. Opamps for Everyone – Ron Mancini

Courses and Certification

For Analog profile, courses like basic electric circuits, Analog circuits, Signals and Systems, Control Systems, Microelectronic circuits, Analog IC Design are required.

Other Relevant Information

Interviewers just want to check how you approach a problem. Try to explain everything on paper of what you are thinking. Try to interact as much with the interviewer. Show curiosity and your drive to solve problems. If you don't get an answer, you can ask for help. Try to

intuitively solve the complex problems with the basics you know. Stay confident and smile throughout the interview. **Sector: ET**

Name: Shilpi Varshney (2017H1240105P)

Company: Western Digital

Profile: Product Validation Engineer

Recruitment Procedure

- Online test, 2 Technical Interviews, 2 HR interviews
- Online test consisted of 4 sections-Aptitude (10 questions), C programming (20 questions), Digital Electronics (20 questions), Analog Electronics (20 questions). The duration of test was one hour and 3 out of 4 sections were to be chosen (Aptitude section was compulsory). Among technical sections, I chose C programming and Digital Electronics. There was no dedicated time for each section, so you were allowed to switch through the sections.
- Aptitude section was of moderate level in which speed-distance-time, probability, work and time, mixtures questions were asked. For Digital section, practice previous year GATE questions, it would help. For C programming section, basic understanding of C language and data structures is required.
- **Technical Interview I** ○ No. of swaps to sort the given array through bubble- sort algorithm.
    - Asked me about my projects mentioned in resume. ○ CMOS implementation of XOR /NAND gate and its working. ○ Working of MOS, V_{DS}-I characteristic, V_{GS}-I characteristics.
    - At last, they asked 2-3 puzzles. The objective was to check the thought process and logic rather than the answer. Have a structured approach while solving the puzzle. Questions asked in my interview were-
    - http://codedestine.com/9-balls-puzzle/

- https://www.geeksforgeeks.org/puzzle-round-table-coin-game/ ○ Cube problem-There is a cube whose faces are painted red. Now if the cube is divided into 27 equal cubes and scattered uniformly on the floor what is the probability that ALL of the cubes have their top face painted red. Initially I answered 26/27.Then he emphasized on the question one more time. Hence, I came up with the answer (which is zero).

- **Technical Interview II**
  It was purely based on your understanding of C concepts. Some of the questions asked in the interview are- ○ char ch=256;

  printf ("%c", ch) ;
  Ans is the character corresponding to ASCII value 0,since the range of char is from 0 to 255.

  - Question on array of pointers. ○ Char to int conversion and then finding the sum of digits.
  - Then they asked me the logic to implement a system on how to find the number of people entering and leaving the room. There is only a single door in the room.

- **HR interview I & II** ○ Introduce yourself.
  - Strengths and weaknesses.
  - Any challenging situation faced and how you handled it. ○ How good are you at giving feedback to people? Can you give me one?
  - Why should we select you?
  - Why Sandisk?
  - Interests/Hobbies.

Sources of Preparation

- Let us C by Yashwant Kanetkar ● CMOS circuit design by Kang.

Courses and Certification

- VLSI Design course is an added advantage.

Other Relevant Information

- Be confident and positive. They mainly focus on your approach and basic concepts, so make sure to speak out your thought process loud.

Sector: ET

Name: Krishna Amritlal Yadav (2017H1230217P)

Company: Western Digital (Sandisk)

Profile: Analog Design Engineer

Recruitment Procedure

- Resume Shortlisting, Online Test, Technical Interview (2 rounds) and HR
- Test had 3 sections:-
    1. Analog electronics (20 questions)
    2. Digital electronics (20 questions)
    3. Aptitude (10 questions)
- Test was of moderate level, conceptual questions were asked in both analog and digital section.

Technical interviews

- There were 2 rounds of technical interview.

1st round

1. Interviewer asked to solve and explain the questions which you already faced in online test.

2. Apart from this few basic questions were asked like VTC of CMOS inverter, setup and hold time definitions with diagram explanation.
3. Implementation of logic gates using 4x1 mux.
4. Asked questions from Current mirror circuits, cascode amplifier and CSA amplifier.

2nd round

1. In second round interviewer asked questions from analog electronics.
2. Derive the transfer function of 2nd order RC circuits. Draw the output current waveform.
3. Few questions were from controls system and networks. **HR round**

Asked basic questions like

Tell me something about yourself?

Why WD? Are you willing to relocate?

Sources of Preparation

VLSI expert website (STA), Razavi (Analog electronics),Kang (VLSI design), GATE study materials.

Sector: ET

Name: Abhishek Kumar Singhania (2017H1230222P)

Company: SanDisk

Profile: Design Engineer

Recruitment Procedure: Online Test, One Technical Interview and One HR Interview.

- Test had 3 sections:
  a. Quant and Reasoning
  b. Digital

c. Analog

- Test was easy (Based on the Gate pattern). However, it is important to maintain speed to finish all questions (Total 50 Question in 1 Hour).
- Interview started with basic questions on STA (Setup and Hold), Basic problem based on Setup and Hold Violation.
- Then he asked some questions related to MOSFET and Basic question based on Digital circuit which are asked in Test and then asked question related to Analog IC Design (differential two stage amplifier and its working).
- And again asked some questions on my Research practice.

Sources of Preparation

- Kang, Rabaey for Digital Design and MOSFET ● STA from vlsiexpert.
- Razavi for Analog.
- RISC(slides)

Other Relevant Information

Prepare your projects well. And also study DFT (Design for Testability) will be helpful in interview.

Sector: ET

Name: Yugandhar Khodke (2015A8PS0373P)

Company: Western Digital

Profile: Product Validation Engineer

Recruitment Procedure

Rounds – Online test, Technical Interviews, HR Interviews

1. **<u>Online Test</u> : [Duration : 1.5 hours]**

4 sections one each for aptitude, analog electronics, digital electronics, and programming. Aptitude section was **compulsory** and you had to attempt **at least one** of the other 3 sections depending upon your interested and the profile you wanted to apply for. The duration of the test was sufficient for attempting 2-3 sections comfortably given you can solve the questions with speed and accuracy.

- **Aptitude** section contained standard questions on data interpretation, reasoning, and quantitative topics, difficulty varied from easy to difficult.

- **Digital Electronics** section had questions on logic function minimization and implementation, combination and sequential circuit analysis, finite state machines, and Static Timing Analysis (STA). Sequential circuits very elaborate (you could easily miss some minute details), STA questions were standard i.e. determine setup and hold time, the clock frequency for FFs-->combination-->FFs circuit. Also expect few questions on digital VLSI design based on the implementation of logic gates on a transistor level by different design styles.

- **Analog Electronics** section had standard questions on basic electrical circuits, the transient response of RLC circuits, MOS and BJ transistors, and Op-amps and various circuits built around them. Basic understanding of courses like μE, Analog Electronics and ADVD would be enough for this.

2. **Technical Interviews :** [Number may vary according to the profile you were shortlisted for]

For this particular profile, **2** were conducted. People who did well in both the analog and digital part of the online test had a sort of mini-interview they had an option to carry on with a profile that worked on mixed-signal design or switch to one with only one of the 2 ie. digital or analog. During this, we were supposed to introduce ourselves and describe why we made the choice we made. [I went with digital electronics]

- **First interview : [** Focuses on basic course knowledge **]**
  The interviewer asked extensions to some of the questions asked in the test, and a few theoretical questions based on basics of FSMs and DD, followed by that were questions based on computer architecture and the

implementation of different modules in Verilog and gave me a Verilog code and how would you implement this on hardware, discussed concepts like blocking; non-blocking assignment. At the very end, he asked a few questions based on STA and its consequences on working of a logic block.

- **Second Interview : [** Focuses on your resume and problem-solving ability **]**
  The interview started with me answering :
  - Why I didn't go to the instrumentation side of electronics?
  - What attracts you to digital design, etc.
  - Some puzzles.

  This was followed by a discussion on IRL systems were implemented on a hardware level (like storage elements etc.), then he asked questions based on the projects I did. In the end, I was asked to design a physical given some constraints (this encompassed the implementation of both datapath and the control algorithm required knowledge of ASM), followed by a discussion on the job profile.

3. **HR interview :**
   Primarily focussed on the non-technical aspect of the resume, also on what led to my interest in digital electronics, Why i didn't go for my master's degree. Followed by a discussion on my PORs and my ability to work in a team.

Sources of Preparation:

- Digital Design (very important) from Morris Mano, Verilog HDL, Basics of Digital VLSI design from the course textbook is sufficient, Computer Architecture (Recommended), www.vlsi-expert.com is a wonderful source for revising static timing analysis. Also, brush up basic ES concepts from the textbook or slides.

- **Aptitude section is generally easy to crack and you can get a perfect score if you have had some prior practice. DON'T IGNORE THIS.**

Courses and Certification

The CDCs of EEE/EnI are sufficient. Computer Architecture (disciplinary elective) is very much recommended

Other Relevant Information

During the interview, remain confident and try to come up with an approach (this is what actually matters) even though you don't know the answer. Make sure you ask relevant questions to the interviewers technical in case of technical interview and in general shows your interest towards the company. Know the type of work you would be doing if you get selected.

Sector: ET

Name: Likhit Teja Valavala (2015A3PS0221P)

Company: Texas Instruments

Profile: Analog Design Engineer

Recruitment Procedure

- Online Test, Technical Interview, HR
- Test had 3 sections (each of them having 20 questions and for 40 minutes):
    a) **Analog**: RC Circuits, MOSFET basics, BJTs, OpAmps, etc
    b) **Digital**: Flipflops, multiplexers, logic gates, etc (Digital Design basics)
    c) **Aptitude**
- Online test was not that easy considering the time available for each section. Choosing the questions carefully and maintaining your speed are the key factors. There was **negative marking** in the test. You can attempt either Analog or Digital sections or both of them. Aptitude is mandatory.
- Separate shortlists were announced for Analog and Digital sections. I was shortlisted for both of them but gave only the Analog interview eventually.
- Technical Interview:
    a) They didn't look much into my resume. Just asked about a project or two briefly and jumped into the basics.

b) RC circuits, step response, OpAmp circuits were the key topics from which all my questions were asked. They drew a circuit, one by one, and asked me to draw the output.

c) Make sure, you speak your thoughts out will approaching the problem. They look into your approach more than the final answer and drop some hints to get close to the solution.

- There was only one Technical round which was followed by the HR interview. It was a very comfortable one. He asked me about my projects in my resume (to explain them in layman's terms), why I wanted to get into TI and my future plans. I was very subtly asked about my plans on going abroad for Masters but I told him that it would depend on my growth in the company and if I found myself in a good position in the company in future, I would prefer doing my job. (Be wise while you answer this question. I just started my answer, you can have your reasons. Present it smartly instead of bluntly rejecting any such possibility.)

Sources of Preparation

Fundamentals of Electrical Engineering by Bobrow (Network theory, RC circuits, step response, AC analysis part), Fundamentals of Analog CMOS Integrated Circuits by Bhezad Razavi (My favorite book. Best for studying about MOSFET amplifiers, different configurations, small signal analysis, etc.) and Analog electronics by LK Maheshwari (OpAmp circuits, the ones taught in Analog electronics course.)

Courses and Certification

Electrical Science, Microelectronic Circuits, Analog Electronics, Analog and Digital VLSI Design and Control Systems.

Other Relevant Information

For aptitude, the test series provided by Placement Unit should be more than enough. For a detailed preparation guide and to handle the worst case scenarios refer to this answer on LinkedIn by Harsh Goyal (BITSian).

https://www.linkedin.com/pulse/how-prepare-texas-instruments-analog-engineerprofile-harsh-goyal-1/

Sector: ET

Name: Abhinav Bhansali (2015A3PS0062P)

Company: Samsung Semiconductors

Profile: Senior engineer - Hardware

Recruitment Procedure

Online test, 2 Technical interviews, HR interview

Online test – The test had only technical questions but five different sections, each of different weightage and difficulty level. The test was very well formed in a way that it was testing, the speed, concepts as well as basics. Questions included from simplifying Resistor networks to MOS based circuits and Digital VLSI.

Technical Interview 1 – The interviewer was a BITSian (Goa) and asked me about what topic I liked the most. Based on that he started asking questions. My answer was Microelectronics and circuits, so he started to ask me about MOS and all its intricacies. He tried to calm me whenever he thought I was getting a bit worried. Whenever I said some term that he felt needed more explanation, he ensured I explained him what I meant. So be careful what you are talking about. He asked why MOS acts as an amplifier. Then he moved on to digital design where he asked me to draw a D latch, its forbidden state and then asked about its basics. After that he asked me to draw a D flip flop and explain its functioning in detail. He also asked about how setup and hold time affects its performance.

Technical Interview 2 – The interviewer asked me some design questions using concepts of digital design like obtaining a constant pulse width clock from a variable pulse width clock, voltages on different nodes for a pass transistor configuration, grilled more about MOS and its functioning, basic amplifier configurations and their performance.

HR Interview – The interviewer was very friendly and asked me to walk with me because he was tired of sitting. He asked about one of my APOGEE projects and why I did not think of commercialising it. He then asked me to build an actual product

and the intricacies if I had to bring it to the market. He was also giving his inputs wherever he felt, so it was more of a discussion. Finally he asked why I wanted to join Samsung and whether I had done any research as to what it does.

Sources of Preparation

For ET Companies, you should be thorough with all the basics, and prepare the following topics nicely:

- Passive circuits, theorems (superposition, thevenin, norton).
- RC circuits and types of filters, intuitive approach and explanations.
- Digital Design – Basics till registers, counters, FSM and structures of SRAM, DRAM and its functioning. (From Morris Mano and slides).
- Microelectronic Circuits – Basics of MOS, its graphs, regions of operation, amplifiers, poles, frequency response.
- Basics of Control Systems, poles zeros, second order responses.
- Microprocessor and Interfacing – basics.
- ADVD – digital part, inverter and its operation, STA (vlsi-expert.com) ● Analog Electronics

Once you are done with the courses, try to search for individual companies and their interview questions, most companies have a standard procedure and always stick to that.

Other Relevant Information

Be as calm as possible in the interview, be in no hurry to rush things because then you will always mess things up. Do not make you resume too fancy rather only include 3-4 projects which you know in and out. Read the project reports and remember all the circuits used. CG is not very important once you are eligible, also if you haven't done many projects but are well-prepared, you have an equally good chance. Placement preparation is different from Compre preparation, as here you have to be thorough with concepts and explain them to someone else. Keep this in mind while studying for placements.

Sector: ET

Name: Pritam Patra (2015A3PS0255P)

Company: Samsung Semiconductors

Profile: Senior Engineer – Hardware

Recruitment Procedure

- Online Test, 2 Technical Interviews + 1 HR Interview
- The test consisted of questions from analog and digital electronics. There was no aptitude questions in it. The test was divided into four sections with 1,2,3 and 5 marks questions.
- The 1 markers were easy. The 2 and 3-markers varied in their difficulty level. Some were easy, some were tough. 5 markers were not much difficult as such, similar to the 2,3 markers but were very few in number(3 or 4 qns).
- Questions in the test were mostly from electrical sciences, analog electronics, digital VLSI design, and digital design.
- Very few were selected for PIs after the test.
- Questions in interview were based on static timing analysis(very important) and other parts of digital VLSI design like pass transistors etc. , from digital design and from one or two projects. Only one or two projects were asked from.
- HR asked simple things like hobbies, why Samsung and about family all

Sources of Preparation

For Digital Design, Morris Mano (every topic upto ASM important),Analog Electronics – Sedra, Verilog from Verilog HDL by Samir Palnitkar or any other standard book and ADVD(digital part) Rabaey and Kang both are good. For other subjects too, the standard course books and practising problems in them would be sufficient.

Courses and Certification

I mentioned my DELS. I had done an online NPTEL course in Biomedical Signal Processing in 3-2 but didn't mention it as it wasn't worth it.

Other Relevant Information

Stay calm for the tests and interview and in interviews try to answer or atleast try to think of some way to solve a question if you are unable to solve. The interviews take it positively that you aren't sure how to solve the problem but still trying to solve it anyhow.

Sector: ET

Name: Arpit Kumar Tiwari (2015A3PS0240P)

Company: Samsung Semiconductor, Bangalore

Profile: Senior Software Engineer Recruitment

Recruitment Procedure

The whole process consisted of **4 rounds**. The GPA cut off was 7.00 and circuit branch students were eligible

1. Online Coding Round:- The first round was a 3 hour online coding round held on Samsung's own software. There was one coding question with 10 test cases and all 10 test cases needed to be passed to qualify for the next round.Problem was variation of travelling salesman problem.6 students were shortlisted after that. 2. Technical interview: This round lasted for about 30 mins. Asked some basic C programming, problems on pointers.He then asked me about my projects. 3. Technical interview: This round lasted for about 1 hr. Asked maximum histogram area problem, another bracket matching problem and to implement quick sort.He then moved to OS asked some basic stuff like virtual memory, scheduling algorithms and segmentation.He then asked about design patterns (Singleton pattern). 4. HR Round:HR was quiet friendly I introduced myself and then he gave me a scenario of the company and asked me to provide measures to quantify efficiency of employees and last section was on my hobbies and an interesting problem based on them.

Sector: ET

Name: Anshul Jain (2015A8PS0398P)

Company: Samsung Semiconductor India Research (SSIR), Bangalore

Profile: Senior Engineer - Hardware

Recruitment Procedure

- Online Test, Technical Interview, HR Interview, Technical + HR Interview.
- **ONLINE TEST**
  Questions from DD, ED, ADVD, MuE, MuP and AnE. There were 4 sections with 1, 2, 3 and 5 mark questions respectively. The difficulty level of questions increases as one moves from section 1 to 4.

  Digital Design - Flip Flops and Latches, Multiplexers, Registers and Counters.

ADVD - CMOS Inverter characteristics, Propagation delays, Static Timing Analysis (STA)

Electrical Science - Basic RC circuits, Diode based questions, Thevnin/Norton

Analog Electronics - Barkhausen Criterion, Opamp configurations, Oscillator circuits.

Electronic Devices - Basic PN junction, numericals involving majority carrier concentration.

Microelectronic Circuits - MOSFET structure, CSA/CDA/CGA, BJTs

2-3 questions from Microprocessor, Control Systems and Signals Systems were also asked.

- **TECHNICAL INTERVIEW**

  1. Draw the characteristics of CMOS inverter.
  2. How will the curve change if Vin goes from VDD to 0 instead of 0 to VDD?
  3. What is the condition for a hysteresis curve in inverter characteristics?
  4. Draw a NAND gate using CMOS technology.
  5. One question on my PS-1 project and some cross questions.
  6. Explain me the procedure used by you to calculate the W/L of the buffer circuit (ADVD Digital Assignment). What is method of logical effort?
  7. One question on my computer architecture project.
  8. Do you have any questions from us? (Please ask at least one question here, otherwise it will leave a very bad impression on the interviewer).

- **HR INTERVIEW**

    1. Tell me about yourself.
    2. Tell me something interesting about yourself which is not mentioned in the resume.
    3. Suppose I want to make a driverless car, then list down all the sensors, transducers and other equipment that will be required to be installed on the car.
    4. Suppose I am your grandmother. Explain me your summer internship (PS1) project to me without using technical terms. (2-3 questions on my explanation)
    5. Who all are there in your family?
    6. What are your plans for MS?
    7. What do you know about Samsung Semiconductor? Do you need any clarifications from our side?

- **TECHNICAL + HR INTERVIEW**
    1. Draw the mod-4 counter.
    2. Explain the master-slave concept in JK Flip Flops. 3. A FSM based question (Traffic light controller)
    4. What are your hobbies?
    5. Mention one point which you liked about Samsung from the Pre-Placement Talk?
    6. Describe one quality that differentiates you from other candidates.
    7. Any questions from us?

Sources of Preparation

- Digital Design - Morris Mano, GATE lectures on YouTube, IIT Madras NPTEL lectures
- Analog Electronics - LK Maheshwari, GATE lectures on Youtube
- ADVD - Rabaey, Kang
- Microelectronics - Sedra, Razavi Online Lectures on Youtube
- Electronic Devices - Textbook

- Electrical Science - Bobrow, IIT Madras Online Lectures, SPICE simulations for AC, DC analysis of RC and RLC Circuits.
- Computer Architecture - Hannesy and Patterson
- www.edaboard.com
- www.vlsisystemdesign.com
- www.vlsiexpert.com
- https://www.electronics-tutorials.ws/
- Brian Douglas videos on Youtube for Bode Plots
- http://lpsa.swarthmore.edu/Bode/Bode.html - Bode Plots
- A GATE prep book for practicing MCQs on DD, AnE and ES
- www.glassdoor.com - Many reviews as well as interview questions for companies are present here.
- Company's Official Website - Read 'About Us' and 'Careers' section.

Courses and Certification

Computer Architecture.

Other Relevant Information

- The company mainly require skills in Digital VLSI Design. So, make sure you have a good understanding of CMOS Inverter and Static Timing Analysis.
- Make some notes during the Pre-Placement Talk and frame some questions. They might ask questions specific to Samsung and the points covered in the talk. Never say 'NO' if they tell you to ask questions from them. Ask at least one question.
- If you have a good CGPA, then frame a good reply for "What are your plans for MS?" question.
- Prepare a layman's explanation to your projects, especially, the PS-1 project.
- Don't include anything you are not comfortable with in your resume. If you are including HUELs in the electives list, then make sure that you have knowledge of what all was taught in that course.
- While solving a question, let the interviewer know what you are thinking by speaking aloud. The approach you are taking to solve a problem matters more than the actual solution.

- While explaining any concept, try to write on the rough sheet as much as you can. Those rough sheets are attached to your resume before they are forwarded for the second round and play a crucial role in your assessment.

Sector: ET

Name: Siddhant Gangwal (2015A3TS0178P)

Company: ROHM Semiconductors

Profile: Analog LSI Engineer

Recruitment Procedure

- Written Assessment: There was a subjective pen and paper assessment. The questions were based on analog circuits - testing concepts of RC networks, OPAMP based circuits, BJT models and MOS based amplifiers. Proper reasoning was expected for answers in this stage.
- Online Test: The second round was an online aptitude and personality test.
- Interview: There was only one interview encompassing both technical and HR questions. The interviewers got the paper of the written assessment and were critically asking questions on both solved and unsolved questions. The questions were to be answered INTUITIVELY! The interviewers wanted to understand your approach to electronics and not your dexterity in handling mathematical equations. A lot of graph based questions were asked (V/I response in both frequency and time domain).

Sources of Preparation:

- ES Textbook – Basic understanding of RC circuits (Mandatory).
- Sedra-Smith (AnE textbook) – OPAMP based circuits.
- MuE Textbook – Razavi (MOS based amplifiers)

Courses and Certification:

- Microelectronic circuits, Electrical Sciences and Analog Electronics. Basics of Electronic Devices.

Other Relevant Information

- Try simulating as many circuits as you can on SPICE. Understand the basic fundamentals of electronic circuits and their response to different types of inputs (Step response being the most important). You will be expected to make a lot of graphs so get a qualitative understanding of circuits rather than scavenging the needless math that runs behind it.

Sector: ET

Name: Vineeth G K (2017H1230208P)

Company: QUALCOMM

Profile: Associate Engineer (H/W)

Recruitment Procedure

- 4 rounds: Online test, technical interview - 1, technical interview - 2 and HR.
- Online test had 3 sections: Aptitude, c programming and technical

Aptitude: logical reasoning, ages, ratio and proportion, profit and loss, time and work, time and distances, percentages.

C programming: section contained questions on determining output of C code as well computer architecture basics.

Technical: digital and analog basics.

- Technical interviews: digital electronics basics, setup and hold, metastability, Verilog HDL, memories, clock domain crossing, computer architecture basics.
- HR interview:

  Why qualcomm?

  What your future plans?

  Which domain you would like to work on?

Project competitions on resume?

Job location?

Sources of Preparation

- Digital Integrated Circuits (vlsi design) - Jan M. Rabaey, Anantha Chandrakasan, Borivoje Nikolic.
- Analog Integrated Circuits- Behzad Razavi.
- GATE Prep Material
- VLSI EXPERT online site for static timing analysis.
- VLSI architecture course content.
- R S AGARWAL FOR APTITUDE. Geek for geeks online site for C programming.

Courses and Certification

VLSI design, VLSI architecture, Analog IC design, CAD for IC design, Reconfigurable computing.

Projects done during the course.

Other Relevant Information

Always be Thorough with the contents in the resume .Be confident at what you say to the interviewer. Majority of questions were on Verilog HDL, so be clear with the basics of Verilog.

Sector: ET

Name: Prateek Rai (2015A3PS0273P)

Company: Qualcomm

Profile: Associate Engineer

Recruitment Procedure

- Resume Shortlisting, Online Test, Technical Interview, HR ● Test had 2 sections:
    a. Aptitude
    b. Computer Science

- Test was easy. However, Computer Science section contained questions from various subjects including OOP, C, OS, DSA and JAVA.
- Questions:
    a. Tell us about your Projects. Questions from Resume.
    b. Follow up questions from what you answer
    c. Puzzle- They care more about the thought process and logic rather than the answer. Have a structured approach to solve the problem and don't guess or make assumptions. Ask for clarifying information if necessary.
    d. HR Round – Typical HR questions.
- Solving the puzzle/having a logical approach to it is very important for the selection.

Sources of Preparation

Leetcode, Coursera, GeeksforGeeks for Puzzles.

Courses and Certification

DSA, OS, OOP, C Programming, Image Processing, NNFL

Sector: ET

Name: Sudeep Singh Chhaukar (2017H1230211P)

Company: Qualcomm

Profile: Engineer (Hardware)

Recruitment Procedure:

- Written Test(Aptitude, C/C++ , Electronics -30mins each with 20 questions).

- Aptitude was of moderate difficulty level, with many questions from data interpretation and other topics of Aptitude ex. Profit-loss, Percentage, Distance and Time, etc.
- Questions related to C/C++ were difficult, questions type mostly covered error finding and output of given code.
- Core electronics part had questions from Digital electronics, few from VLSI design.

- Technical Interview ○ Interview 1: The focus on this interview was many Digital Electronics and Verilog, interviewer started with asking questions on following topics:
  - Designing a circuit from a given waveform.
  - Given a D Flip Flop and XOR gate and design a circuit for the waveform
  - Positive triggered D flip flop and a waveform as its input, draw it's output waveform. The catch here was he drew few input at the clock edge which might go metastable.
  - He asked few questions on writing verilog code.
  - One question was on Flip flop conversion, but he wanted the answer in terms of mux. So by seeing the truth table I used two mux and completed the conversion.
  - One or two questions were to implement the given expression using only NAND gates.

  ○ Interview 2: The focus of this interview was purely on VLSI Architecture.
  - Interviewer started with questions about Snapdragon(Qualcomm processor).
  - Then questions on processor of Laptop(CISC) and Moblie(RISC), their power requirements etc.

- We did two projects in VLSI Architecture a RISC and CISC, he asked many questions on these two architecture, I was asked to draw the block diagram and detailed discussion on each block.
- Few questions on writing verilog code.

Sources of Preparation ●

Rabaey

- VLSI Design (Lecture Notes)
- VLSI Architecture (Lecture Notes)
- STA online site “vlsiexpert”

Courses and Certification

- VLSI Design
- VLSI Architecture
- Digital Electronics

Other Relevant Information

- Be confident and take your time while replying any question, no need to respond quickly.
- Practice questions regarding Digital Electronics design, cover all combinational, sequential circuits thoroughly.
- Verilog Coding is important, do practice.
- Projects are most important, write few pages by yourself giving detailed explanation. Think where an interviewer can ask questions.
- Practice Aptitude, as the difficulty level varies each year.
- C/C++ do not devote too much time on this but have sufficient knowledge on this to clear the cutoff.

Sector: ET

Name: Utsav Jana (2017H1400173P)

Company: Qualcomm

Profile: Engineer (Hardware division)

Recruitment Procedure

- Online Test, 2 technical interview, 1 HR ● Test had 3 sections:

    a. Quants. Questions were mainly from Data Interpretation, Linked Paragraph based question, and syllogism questions.

    b. The technical section had two options. . One was digital engineering domain and another was communication engineering domain. Questions were GATE level questions with slight twist and modifications

    c. C language and Data structure MCQ was another section. The questions were somewhat tricky, searching , sorting algorithms, pseudo code etc

- Test was of medium level . However, it is important to maintain speed to finish all questions. And the most important part is every three sections had individual cutoff for next round.
- In the first technical questions were from Projects, their applications and Static Timing analysis
- Second technical was based on Static timing analysis, pipelining concepts, Analog to Digital converters and Vice versa , Cache concepts, virtual memory and also Verilog HDL. Clock domain crossing and Low power design were also asked. Some questions were also asked on my summer internship at IIT Kharagpur. Lastly after the technical questions I was asked a puzzle .

Sources of Preparation

- Digital Design book by Morris mano or By Brown, Verilog HDL by palnitkar, Rabaey Digital circuits, Sedra Smith for ADC converters and basic transistors. ● Online source for STA concepts.

Courses and Certification

- VLSI design , VLSI architecture , ADVD , Computer architecture , Digital Signal Processing **Other Relevant Information**
- Try to be confident .
- Focus on the basics
- Convince yourself and the interviewer why do you want to join core ET companies and specifically qualcomm .

Sector: ET

Name: Mayekar Kiran Uday (2017H1230212P)

Company: Qualcomm

Profile: Engineer

Recruitment Procedure:

- Online test, two technical interviews and an HR interview
- Online test had three parts – technical, aptitude and programming. The aptitude part contained quant, verbal and data interpretation while the technical part consisted of basics of analog and digital with c programming and arrays and linked lists i.e. data structures in the programming section.
- Test was relatively easy and manageable within the time limit. Focus on data structures and c programming as well as data interpretation.
- The first technical interview was based on CAD project – Implementation of AMBA bus architecture, in which the interviewer asked about how it was implemented, whether it was synchronous or not. Even opened up the ARM manual and asked to explain the timing diagrams and the significance of the various signals.
- The second technical interview was more practical oriented wherein he asked about the latest processors in the market and their versions and which mobile phones have qualcomm processors. He gave a scenario about having a processor with the internal details not known like a black box and only knowing the instructions it supports, in this how would you find out the maximum operating

frequency. He also asked about cache – what is it, why is it used and its different types. Another question was given an encryptor, designing its corresponding decryptor and lastly to write a Verilog code for the same encryptor.

- In the HR interview, the interviewer asked first to introduce myself and then about the reasons for joining that specific company and what areas I would like to work on and whether I would have a problem with relocating

  anywhere. Also what did I know about the company and if I had anything specific to ask about it.

Sources of preparation:

Prepare C programming from geeksforgeeks.org and data structures from tutorialspoint.com and aptitude basics from R.S. Agarwal. Technical from the course reference books.

Courses and Certification:

No additional certification required

Other Relevant Information:

Before going for the interview, read about the company you are interviewing for, its background and most importantly what it is currently working on.

Sector: ET

Name: Dilsya Joy (2017H1230220P)

Company: Qualcomm

Profile: Engineer

Recruitment Procedure

Online Test, Technical Interview, HR

Online Test:

The test comprised of three sections: Aptitude, Technical and Programming. Each section had 20 questions and 30 mins given for each. The aptitude section had questions from time and work, time and distance, ratio proportion, mixture alligation, percentage, code decoding, data interpretation. This section was easy but the data interpretation part was lengthy. Technical section had questions from digital electronics (MUX, combinational circuit, counter), analog electronics (Diode circuits, multivibrators, Schmitt trigger), EDC (Direct Fermi Level formulae questions), microprocessor (find the output). Programming had questions from C programming, data structures.

Technical Interview:

There were three rounds of technical interview. First round I was asked questions on Verilog coding, Setup and hold time questions, question on metastability. Second technical interview I was asked about my recent project and some basic MOSFET questions. Third round of interview was on VLSI architecture. I was asked to draw and explain the entire 5 stage pipeline processor. Also a few practical questions were asked like he gave a scrambler circuit I was supposed to make the descrambler circuit using min hardware.

HR:

The HR round was a casual interaction. Standard questions like why qualcomm, why should we hire you, describe yourself in one word were asked. Just be confident and focus on basics and you will be able to clear your interview

Sources of Preparation

Static Timing Analysis from http://www.vlsi-expert.com
C programming from Let us C and https://geeksforgeeks.org/c-programminghttps://geeksforgeeks.org/c-programming-language/language/

Sector: ET

Name: Rutwik Narendra Jain (2015A3PS0726P)

Company: Qualcomm

Profile: Associate Engineer

Recruitment Procedure

- Online Test, Technical Interview, HR interview ●

The test had three sections

- **Aptitude:** Questions on quantitative reasoning (including profit, loss and discount, mixtures and dilutions– all typical Quant topics) and logical/qualitative reasoning (passage type question on assigning jobs to people based on given information etc.).
- **C Programming:** Basic questions on outputs and syntax (errors in code, outputs of code snippets, return type of basic C functions such as printf etc.). Basic CP needs to be conceptually clear.
- **Electronics**/Communication/Computer Science: One of the three sections needs to be chosen. I attempted the electronics section. The questions were predominantly on basic electrical sciences (ES – RLC circuits, time response) and digital design (MUXes, decoder implementation, flip-flop based circuits, FSMs, SRAM cells). A few questions on basic analog electronics (AnE), two questions on bandgap energy dependence on temperature (initial part of ED).

- The test was fairly easy. The C Programming section requires that one goes through the minute details of C, but that too isn't very difficult. Speed in solving questions is necessary. There is section-wise timing and you can't go back to a section once attempted, nor can you change your attempt order.
- Technical interview
  - Introduce yourself, what's your field of interest?
  - Questions on interests and projects in my resume, which then carried forward to questions on topics/subjects related to those projects (for example, starting with my CompArch project on 'Multi-cycle processor implementation using Verilog', I was asked first about how we went about the implementation, multi-cycle vs. single cycle processors, pipelining, basic Verilog, FSM for control unit, FSMs in general, that took us to digital design and Digital part of ADVD).

- Static Timing Analysis (STA) is very important, you can expect questions from this for any core EEE interview.
- It is important to impress the interviewer. At the same time, if you don't know any answer, work it out along with the interviewer's help. It's the approach that matters to him, not the final solution. Think aloud, or keep speaking as you write. Along the way, the interviewer will push and shove your approach in the right direction.
- A large chunk of my interview was on Digital Signal Processing (DSP), because I had done the course, included the course project on my resume and, my interviewer had done his masters in that subject (:P). Initial questions were on the project topic 'Cepstral Analysis', and

  later diverged to FFT computation, efficiency of butterfly algorithm, and Discrete Cosine Transform (DCT). It is imperative that one has her/his concepts right in whatever projects have been put on the resume.

- HR Interview
  - Tell me about yourself?
  - Why Qualcomm?
  - Why not research? Why not go for an MS? (Anyone with 9+ CG will definitely be asked this question, and your interview hinges upon how your response was to it).
  - HR was fun for me. It was post dinner, and the interviewer was very chilled out (offered me the last almond from her tiffin too!). I was enthusiastic as this was my last chance for the day, a little overly passionate while speaking maybe, for she said later that I bring a lot of energy to the surroundings (:P). She gave me free rein over the conversation, and I talked frankly about my hobbies, interests, passion for music, working for Team Anant, and how that ignited interest in core.

Sources of Preparation

1. **Aptitude:** The online aptitude courses that PU registered us for were brilliant. They covered every possibility exhaustively. Practice a lot during holidays for this, because this will always take a backseat later when you have core preparation.
2. **Digital Design:** Morris Mano is your Bible, practice Verilog by writing code and verifying it (Mano also has Verilog questions for practice), STA from Rabaey/vlsi-expert.com.
3. **Electrical Sciences:** Leonard S. Bobrow. Alternatively, Alexandar Sadiku. Only first few chapters, till second order RLC circuits and frequency response.
4. **Analog Electronics:** Sedra and/or LKM. Cover everything, including 555 timer and voltage regulators.
5. Be thorough with your projects, any and every subject related to your project should be on your fingertips, if you are not confident of that subject, or haven't done much work in the project, don't include it on your resume.

Courses and Certification

Digital Design (Morris Mano), Electrical Sciences, Analog Electronics (Sedra), Computer Architecture (caching and other basics) (Patterson and Hennessey), Industry uses Verilog HDL, so Verilog knowledge and projects/working familiarity helps a lot.

Other Relevant Information

- Any interviewer at the end will always ask you if you have any questions for him. **Always** ask some (relevant) question, be it a technical or an HR interview, so that you look interested to work at the organization, and you get to know more about the company too. If you don't ask him more about the company, he may conclude that you don't have the drive or motivation to join.
- Read through all testimonials, talk to seniors and compile a list of topics/subjects you need to do. Don't waste time on what will never be asked, such as EMT or EMach. Selective and focused preparation is key. All the best!

Sector: ET

Name: SHREYA TYAGI (2017H1240096P)

Company: National Instruments

Profile: RF DSP Algorithms

Recruitment Procedure

1. Written

- Descriptive type questions, 8 in number.
- Non-eliminatory round.
- All questions from Communication.
    - PCM. ○ Spectrum Analysis.
    - Sampling Theorem based.

2. Technical Interview 1

- Communication Engineering based.
- Questions ranging from basic to advanced level.
- Basic Analog and Digital communication.
- Communication system block diagram and relevance of each block.
- ADC and MPC .
- Various modulation techniques and their pros and cons.
- Communication based project.
- About 1.5 hours.

3. Technical Interview 2

- DSP and Communication engineering based, more focus on DSP.
- Filter types, their pros and cons.
- Quantizer based questions.

- A black box has two same inputs, with one being delayed, find the delay.
- More focussed on approach.
- ADSP project.
- About 1 hour.

4. HR

- Analytical Questions.
- No HR type Questions.
- Given a black box in forest, how to extract bird's sound, then a particular bird sound, remove the background noise.
- 10-15 minutes.

Sources of Preparation

- ADC and MPC Courses .
  - ADC : Sainath Sir Notebook.
  - MPC: Rappaport.
- Communication and DSP Gate level.

Courses and Certification

- No special courses required, thorough knowledge of ADC, MPC, DSP and Communication system

Other Relevant Information

- More Application based questions.

Sector: ET

Name: Piyush Agrawal(2017H1240111P)

Company: National Instruments (R&D)

Profile: Software Engineer

Recruitment Procedure:

This Company came solely for M.E Communication and profile was Software Engineer (RF DSP ALGORITHMS DEVELOPMENT)

Round 1 (It wasn't an eliminator round everyone was interviewed)

It was a pen paper subjective test, there were 7 questions all on basic Signals and Systems and DSP as follows

- Nyquist rate.
- Quantization error and Encoding (PCM).
- Sampling in time and frequency domain (spectrum plotting).
- Analog to Digital filter conversion.
- Shannon channel capacity theorem.
- Fourier transform (spectrum plotting). **Round 2 (1st Technical interview)**
- It started with brief introduction of my self then they asked me my area of interest (Wireless Communication (WC))
- Which projects on WC (Cooperative Communication) and questions related to this project.
    - What is Cooperative communication.
    - Advantages of Cooperative communication.
    - What is Diversity and Cooperative Diversity.
    - What is outage and spectral efficiency.
- Question on Digital Communication

- Comparison of MPSK and MQAM in terms of probability of Error (plotting graph of 8-PSK and 16-QAM) and Spectral efficiency and Energy efficiency.
- How are bits mapped to symbol and send over carrier in QPSK explain using Constellation Diagram?
- Comparison of probability of Error in 16PSK and 16QAM using constellation diagram.
- What is Fading, types of Fading, How to Mathematically model Fading and ways to mitigate Fading (ANS: Diversity for flat fading and Equalization for frequency selective Fading).
- What is Equalization.
- If my delay spread is 2µsec and signal duration is 1µsec the find the no of tapes of Equalizer.
- What is transmitter and receiver Diversity.
- When is Alamouti scheme used and what does it says.
- Diversity and Multiplexing Gain of 2x1,1x2,2x2 systems.
- When to use Diversity and Multiplexing.

● Questions on DSP

- You have a spectrum x(f) as triangle from -5k to 5k this is passed through 3 blocks continuous to discrete converter with sampling frequency f1 and then passed through a digital low pass filter of cutoff frequency of π/2 then again passed it through discrete to continuous converter with sampling frequency of f2 plot spectrum at the output of each block. Take 1) f1=10khz and f2=10khz 2) f1=20khz f2=10khz 3) f1=10khz f2=20khz.
- What is interpolation and decimation?
- What is up sampling, down sampling, over sampling, under sampling.

- Which to use first interpolation or decimation in a cascade and why?

Round 3 (2nd Technical interview)

- They stared with my ADSP project Adaptive Feedback cancellation.
  - Explain what you have done in this project.
  - What performance matrix did you choose to optimize the result (MMSE)
  - Derive expression for MMSE and how it optimizes your problem.
  - Why Minimum Mean Square Error why not absolute value of error.
  - Write weight update equation for LMS and NLMS how can you make it variable step size.
- Questions on Communication.
  - What is OFDM?
  - Advantages and How it's done.
  - What is cyclic prefix? Advantage of Zero padding.
  - Why not zero padding instead of cyclic prefix.
  - Show how will you get circular convolution from linear convolution using cyclic prefix
  - What is PAPR how can it be improved.
- Questions on DSP.
  - What are the types of digital filters and how are they designed.
  - Some equations were given, and they asked me to identify the type of digital filter (LP, BPF, HPF, BSF) and plot the response of filter.

- What is FIR filter condition for linear phase FIR filter and how can we achieve linear phase.

- What happens in other domain if we bandlimit the signal in one domain (Gibbs Phenomena).

- You have 2 inputs one is $x(t-t_0)$ and other one as reference input $x(t)$ how will you design a system with these 2 inputs to find out the value of t_0.

Round 4 (Behavioral interview)

- Just a brief introduction of myself.

- Why you choose Communication Engineering.

- They gave me situation to design a DSP system which will perform particular task they wanted to see my approach towards problem not for accurate solution.

- The task was as follows. You are in a jungle and want to identify that if there is a peacock near i.e. out of all birds chirping we need to identify the voice of peacock.

- Then they added another condition that system should be capable of detecting 5 to 6 different bird sounds.

- Then they added another condition that there is high background noise like water flow etc.

- How will you determine the power of a periodic signal whose period is unknown? **Sources of Preparation**

- For Wireless Communication refer to Andrea Goldsmiths n Vishwanath, Sainath Sir's Slides n Class notes.
- For Mobile communication refer to Rappaport.
- For DSP refer to books by proakis and Oppenheim.