BITS Pilani
Pilani Campus

INTERNSHIP CHRONICLES

SUMMER INTERNSHIP
INTERVIEWEE TESTIMONIALS

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Domain:

ANALYTICS

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Sector: Analytics.

Name: *Aatif Hoda (2018B3A40020P)*
Company: Accenture
Profile: Data Analytics Intern

Recruitment Procedure

- Online test, Technical round 1, Technical round 2, HR round.
- The test had 6 sections –
  - Verbal Ability
  - Quantitative Ability
  - Logical reasoning
  - Critical Thinking
  - Reading Comprehension
  - Coding
- All the sections were MCQ, and were timed, with each section having 5,7 or 10 questions. The coding section had 30 MCQs which had to be answered in 30 minutes. The questions ranged from basics of SQL and python, to data analytics, machine learning, neural networks and Spark SQL.
- **First Interview** – It started with an introduction, followed by questions on past internships and projects. The questions revolved around data analysis techniques used along with econometric methods. This was followed by a case study, and the interview ended.
- **Second Interview** – This was taken up by a Senior Manager, and revolved around basic questions from statistics. Later she gave some tips on skills to learn for the field of data analytics
- **HR Interview** – The HR Round revolved around resume discussion, some ethical questions and expectations of Accenture. The round ended with discussion on the work culture of Accenture.
- Knowing the basics of any data analysis method (SQL, Pandas using Python, ML, Neural Networks etc) is very crucial, as most of the questions were related to these fields. Moreover, since the company was open for non-cs/eee/eni dualites, they knew the students aren't proficient with data science and ML, but they look for students who want to learn.

Sources of Preparation

Look into case study prep guides. Also, go through your projects thoroughly, else you won't be able to answer the questions put by the panel.

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Courses and Certification

The relevant courses from the curriculum would be PnS, and a few economics CDCs (Mathematical and Statistical Methods, Econometrics and Applied Econometrics).

Other Relevant Information

Like most interviews, the questions were more FIT based than SKILL based. You need to be able to convince the recruiter why you wish to join that particular organization and not work in some other sector.

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Sector: Analytics.

Name: *Ishita Bhatnagar (2018B5A10306P)*
Company: Accenture
Profile: Data & Analytics

Recruitment Procedure

- Resume shortlisting + Online Test + 3 interviews (1 Technical, 1 Managerial & 1 HR)
- The test had 6 timed sections (like 7 min for 7 questions), navigation between questions was allowed. But the sections couldn't be switched.
- Topics covered in the test were around Aptitude questions like HCF & LCM, Relational, Graph Interpretation, and Data Analytics related technologies like Python & SQL.
- The first 5 sections were on the easy to moderate side, but the technical section was on higher difficulty. Speed had to be maintained throughout.
- Questions asked during interview rounds were based on the relevant skills & projects on the resume. For example :
    - Regression, Case Study to be analysed from the perspective of a Data Analyst
    - Classification models & basics of ML
    - HR questions like short-term & long-term goals, conflict management, elevator pitch.
- Being your authentic self, and confident in your answers is important. A positive body language and being interactive helped a lot.

Sources of Preparation

There's a website called prep insta that has company specific relevant resources. Other than that python interview questions article on interview bit could be of help as well.

Courses and Certification

Numerical methods of Chemical Engineering, Computational Physics, Python YouTube tutorials and Projects done to showcase that particular technical skill (adds credibility).

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Other Relevant Information

Be thorough with the resume, only mention the information you're confident about and can talk about it. Ask relevant knowledgeable questions about the company and have a rough outline prepared for answering HR questions.

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Sector: Analytics

Name: *Rishi Ghosh (2018B2A440491P)*
Company: Accenture
Profile: Data Analyst

Recruitment Procedure

- The first round was a technical online test which was divided into 2 sections:
  - Cognitive assessment included 35 questions on:
    - Abstract Reasoning
    - Analytical Reasoning
    - Quantitative Ability
    - Critical Thinking
    - Data Interpretation
  - Technical assessment includes 30 questions on.
    - Fundamentals of Machine Learning
    - Python
    - SQL
    - Hive & Spark
    - Concepts of Data Science
  - The test was 70 minutes, and it was an easy test except some of the questions related to Hive and Spark as it could have been answered only if you have worked beforehand with these frameworks.
  - The most important aspect of this test was speed and accuracy as one had to answer all these questions in less than 2 minutes.
- After the technical round, there was interview round which had 3 rounds in total – 2 technical
- rounds and HR interview (final round).
  - The first technical round was focused on the ML related projects done in any previous internships and basic concepts of Machine Learning and Data Analytics.
  - The second technical round was more about the application of data analytics in a real-world scenario with the help of some case studies. This round specifically aimed at candidates who were good at problem solving.
  - The final HR round is basically where the interviewer asks about basic details, hobbies, strengths, weaknesses, and future aspirations.

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Sources of Preparation

For an interview, revise machine learning and data analytics concepts; that should be sufficient.

Other Relevant Information

Be confident about your answers and don't waste time in thinking too much while answering a question

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Sector: Analytics.

Name: *Ruchir Mathur (2018B1A440617P)*
Company: Accenture
Profile: Data Analyst

Recruitment Procedure

- The whole procedure consisted of 1 online test, 2 technical interviews and 1 HR interview.
- Online Test:
  - Had multiple aptitude sections which included logical reasoning, numerical based problems, statement problems (assertion/reasoning) and data interpretation.
  - The questions were pretty easy and the only thing to be kept in mind was the paucity of time.
  - The online test also had a technical skills section, wherein questions of moderate/higher difficulty were asked.
  - They required intermediate/advanced knowledge of python, SQL, machine learning and algorithms. Few questions related to Apache, Hadoop, big data, spark, P&S were also asked.
- The shortlisted candidates for the interview round were informed after 1/2 days.
- The first interview round was mostly technical based:
  - The interviewer started off by asking me to explain my Deep learning project (I did it in PS-1).
  - He then proceeded to ask me questions centered around it (like how to handle imbalanced data classes, classification algorithms).
  - The interviewee should be thorough with his/her resume, especially with any data science projects.
- The next round was a shorter one. I was asked to explain my perception of data science, its impact, etc. This was more of an elaborative and subjective based round.
- The last round was an H.R interview. The questions were pretty standard.

Sources of Preparation

GFG and interviewbit for basic SQL, python, data science questions. Various blogs for simple explanations of machine learning concepts and algorithms.

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Courses and Certification

Any online courses related to python, deep learning/machine learning will certainly help.

Other Relevant Information

Knowledge and experience in machine learning/deep learning is a must. For the interview, be prepared for technical questions related to any data science project you have mentioned/done. Have a good speed and accuracy for the online test round.

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Sector: Analytics

Name: *Aarya Makwana (2018B3A80871P)*
Company: Wells Fargo
Profile: Data Analytics

Recruitment Procedure

- Resume Shortlisting, Online Test, 2 Technical interviews, 1 HR interview.
- Test had 5 sections:
  - Verbal
  - Data Interpretation
  - Critical Reasoning
  - Quant/Aptitude
  - Coding (2 DSA questions)
- Test was easy. However, it is important to maintain speed to finish all questions as attempting only one question at a time was allowed. Last section had two coding questions out of which one was easy and one was moderate.
- Technical interview 1:
  - First interview was around 45 minutes long. There were two interviewers and it started with introducing myself.
  - When I stated I am interested in ML, they asked me questions about my experience in ML and then started asking questions related to regression models.
  - The questions varied from mathematics/statistics part of regression analysis to the applications part. Later, I was asked questions on NumPy and pandas.
  - In the end, they asked me some basic questions on econometrics as I was an economics grad. I was able to answer around 70-80% questions correctly overall in this round.
- Technical interview 2:
  - This interview was short (20-30 minutes) and was with a senior from Wells Fargo.
  - He discussed my resume thoroughly and the projects in it. It was more of a discussion on what I did in each project.
  - Then he asked me a bit about neural networks. I was also asked a question related to DRM as it was mentioned in my resume.
- There was a final telephonic HR interview round which was a mere formality and there was no shortlisting based on it.

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Sources of Preparation
InterviewBit, GFG

Courses and Certification
Data science/ Machine learning related

Other Relevant Information
Be confident during the interviews.

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Sector: Analytics

Name: *Amartya Pandey (2018B2A80689P)*
Company: Wells Fargo
Profile: Data Analyst

Recruitment Procedure

- Required CGPA cut-off to apply: 7.0
- The Recruitment Procedure: Online Test, 2 rounds of Technical Interview and HR Interview.
- Online Test on AMCAT:
    - There were 4-time limited sections with sequential navigation.
    - There were sections based on logical reasoning, English proficiency, quantitative aptitude, data interpretation and the coding round.
    - Coding Problems were pretty simple but we had to find the most optimal solution because there was a huge constraint on time complexity.
    - Both the questions were on string operations and manipulation (Using brute force gave TLE for almost all test cases).
- Technical Interview Round 1: Around 20 people got shortlisted for this round.
    - It had two interviewers and they asked me for an intro and basic PnS stuff, puzzles and about the math courses from college.
    - They also asked me about my experience in ML and any projects regarding that. Having an idea of ML techniques is a plus although you can straight away deny it if you don't have any experience in it.
    - Lastly, they preferred the knowledge of python (although C++ could work with them). Asked me to code 2 questions on VS Code (I presented my screen on the zoom meet for the same).
- Technical Interview Round 2: This Round is taken by a senior executive from the company.
    - He basically grilled me a lot on my resume and projects, so try to be thorough with that.
    - After the resume part he moved on to the quantitative aptitude part and asked some questions from Probability and Statistics and class XII integration and limits to be solved on paper.
    - He cared more about the approach rather than the final solution. He also asked me to explain the 0/1 Knapsack problem and Genetic Algorithm in layman terms (It is related to my resume, don't worry).
    - He also asked me about stocks and bonds and how they worked. At the end he

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asked me why I applied to a firm like Wells Fargo.

- HR Round: It was a telephonic conversation lasting 10 minutes only. He asked me some things about my family background, education, and my long-term goals.

Sources of Preparation

Interviewbit for Python, Prof. Suresh Kumar Notes (just the basics of both probability and statistics), Glassdoor and GFG (past experiences of interview at Wells Fargo).

Other Relevant Information

- Try to convince them about your interests in the firm and read the firm's Wikipedia page (or attend the PPT).
- If you mention any ML/AI related stuff, it's a plus but be ready to be grilled on them.
- Try to interact with the interviewers as much as you can and think your approach to any problem loudly (practice this as it takes time). Ask them follow up questions about the work culture and all, at the end of the rounds.

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Sector: Analytics.

Name: *Ayush Tiwari (2018B1A20498)*
Company: Wells Fargo
Profile: Data Analyst

Recruitment Procedure

- Online Test (Eligibility: non-cs dual degree with CG >= 7): 5 sections
  - English Proficiency: similar to BITSAT.
  - Quantitative Ability: questions were easy speed, and accuracy is the key
  - Critical Reasoning: common sense is enough
  - Data interpretation: Don't panic with the amount of information usually they'll ask all the questions from a small subset.
  - Coding section: 2 easy questions (40 min). **Pay attention to the header files**
- The online test was easy. The shortlist for the Interview (just my observation) came down to the coding section; make sure you are well versed with at least one programming language.
- Technical Interview (40-50 min):
  - Tell me about yourself.
  - Walk me through your resume.
  - Discussion on projects (having a project in the analytics domain is a plus), Make sure you can defend every aspect of your project; this component had the most weightage throughout the Interview
  - Questions on Python, NumPy, Pandas, linear regression, logistic regression, basic statistics.
- Senior manager round (25-30 min): This round was very chill. The interviewer started by asking questions about Wells Fargo and my understanding of their work. Then came down to projects and questions around the tech stack used in the project, and this part again made up for most of the time in the Interview.
- Tips:
  - Read the JD thoroughly and attend ppt for better understanding of the company.
  - Both rounds started with "tell me about yourself"; Try to mention skills you are confident of defending as your tech stack (related to data analytics), high chances they'll jump to these skills leaving the zone where you might be weak or didn't have much time to prepare.
  - After every round, you can ask questions from the interviewer, prepare this section and build 2-3 questions connecting each other. Overall, you have to send two messages that you are interested in the company work culture and eager to fill in

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all the skills you lack. Treat this component as important as the projects

Sources of Preparation

- Case 1: (Follow this strategy if you have less than a month left for SI season to start)
    - Watch any Python video on YouTube, then go to https://www.kaggle.com/learn/python to complete this course.
    - https://jovian.ai/learn/data-analysis-with-python-zero-to-pandas: Do this course if you don't have any specific skills for data analytics including projects. (Won't take more than one week if you already know basic Python)
    - For Probability and statistics, watch any YouTube video a day before on 2x; if you don't have time, most questions are easy.
    - Aptitude: Prep leaf or 2-3 mock tests are enough.
    - ML: list out all the basic algorithms and get a theoretical idea about their implementations
- Case 2: if you have time on your hands, learn these skills: Python (NumPy, pandas, seaborn, Matplotlib), Probability and statistics, SQL, Machine learning, Tableau basic, Excel.

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Sector: Analytics.

Name: *Manas Pawar (2018B1A30626P)*
Company: Wells Fargo
Profile: Data Analyst

Recruitment Procedure

- Resume Shortlisting, Online Test, 2 rounds of Technical Interview, HR
- Test had 5 sections:
    - **English Proficiency:** Based on a short passage, the only type of question was to identify if the given statement can be inferred from the passage or not.
    - **Logical Reasoning**
    - **Mathematical Aptitude**
    - **Data Interpretation:** Questions were based on few tabular/graphical data interpretations.
    - **Coding Section:** Consisted of 2 easy coding questions.
- The test is easy, but speed and accuracy are crucial as all the sections are timed and revisiting answered questions isn't allowed (allowed only in the coding section).
- For the 1st technical interview round, basics of Python language or any equivalent data science programming languages is required. Probability and Statistics is the key area of focus in the first round. Questions on Machine learning basics were also asked.
- The 2nd technical round is with the Senior Manager. I was asked to explain my projects mentioned in the CV along with follow up questions. Having a ML project on the CV is a plus. In the end, asking a question about the company or the work culture is appreciated.
- The HR round was on phone call and included questions like why Data Analytics (mention your interests and your relevant skill set), tell us about yourself/ about your family background etc.

Sources of Preparation

- Interview tips: https://worknearyou.net/wells-fargo-interview-questions-and-tips/
- Probability and Statistics from: https://sites.google.com/site/sureshkumaryd/home/assignments#h.womkjnsybvmg
- Machine Learning fundamentals from YouTube and/or ML course on Coursera (by Andrew NG)

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Courses and Certification

No certificates required. A good hold on Probability and Statistics course, Python (or equivalent Programming Language) and ML fundamentals would be greatly helpful.

Other Relevant Information

The recruitment process is not tough if all the points mentioned above are incorporated. Good communication skills, confidence and passion are equally important during the interview rounds.

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Sector: Analytics

Name: *Shashank Sharma (2018B1A10489P)*
Company: Wells Fargo
Profile: Data Analyst

Recruitment Procedure

- Online Test, Technical Interview, Senior Manager Interview, HR Interview
- Test had 5 sections:
    - **English Proficiency:** Questions of finding the correct words among the options, it was similar to the BITSAT English section.
    - **Logical Reasoning:** Had easy questions like finding the correct match from the option and family relations.
    - **Mathematical Aptitude:** Basic questions which don't require preparation.
    - **Data Interpretation:** A graph was given, and you must analyze it in order to find the correct answers for the given questions.
    - **Coding:** Questions were easy, and one should have command on recursions and number theory in order to pass the test cases keeping in mind the corner cases as well which turns out to be very time consuming.
- Test was easy, but speed was required in order to score well as sections were timed and going back was not allowed.
- For the technical interview one should have good command of Python on Jupiter, Machine learning, basic problem solving and Permutations and Combination for excelling in the interview.
- The Senior Manager Round rotates around your resume projects and presentation skills, some technical questions may be asked depending upon the interviewer. One should know everything about the project which he has mentioned in the resume and should answer confidently. In the end asking questions about the work culture of the company is preferred.
- HR round includes questions like why did you choose this field, tell us about yourself and where do you see yourself 5 years in the future.

Sources of Preparation

PnS notes from second year, Machine Learning Andrew NG, Aditya Verma Youtube.

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Courses and Certification

No such things were required. Just have a good command on Probability and Statics and easy questions on programming in Python will be very useful.

Other Relevant Information

- The interview was more about your confidence and passion to join the company and not skills.
- Fluent English speaking along with good convincing skills gives an edge over other candidates.
- Try to record the PPT session of the company and watch it before going to the interview and research about your division in the company and its importance for the success of the company.

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Domain:

BANKING AND FINANCE

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Sector: Banking & Finance

Name: *Vaibhav Agarwal (2019A3PS0870P)*
Company: Arcesium
Profile: Software Developer Intern

Recruitment Procedure

- Resume shortlisting, Online Coding+Aptitude round,3 Technical Interviews, 1 HR interview
- Firstly, the resume shortlisting was done.
- Then the online test was conducted on Hackerrank. The test had the following format:
    - 15 MCQs (20 minutes): Mathematical questions asked
    - 15 MCQs (15 minutes): CS conceptual and output based questions
    - 2 Coding questions (45 minutes)
- The test was of a moderate level and being fast is a must to solve most of the questions. Switching between questions was allowed, but it was prohibited to change the sections.
- 1st Technical Interview:
    - I was asked to tell my favorite subjects and also had to give a brief introduction about myself.
    - Then my favorite data structure was asked from me, and questions based on it were asked. Knowing the time complexities very well is a must.
    - Then we moved on to coding in which I was asked a question based on trees and we had a healthy discussion related to the question.
    - The interviewer asked me in the end if I had any questions to ask him. I did ask him some good questions. One should never say “No, I don’t have questions to ask” to the interviewer.
    - The interview lasted for 45-50 minutes
- 2nd Technical Interview:
    - This round was exactly similar to a coding round in which I had been given one question to code and there were multiple test cases to run it on.
    - The question was more of a Sliding window based approach using some known data structures like maps and sets.
    - Here, I was not allowed to discuss my approach with the interviewer keeping in mind that we are generally advised to discuss the approach with the interviewer.
    - The code should be readable, well-indented, and proper naming should be given to the variables.
    - Comment the code as well if you have time in hand. I had finished the code 15

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minutes before the mentioned time and thus, had commented on it as well.
    - Deal with corner cases as well!
    - The interviewer asked me if I had any questions for him. I did ask him some questions.
    - The interview's allotted time was 45 minutes but for me it was over within 35 minutes as I completed the question early.
- 3rd Technical Interview:
    - The interviewer asked me to introduce myself.
    - He asked me about the subjects I have studied and I answered that I know DSA and OOP very well.
    - We then jumped onto OOP. He asked me to explain what OOP is and what its pillars are. I explained Abstraction, Inheritance, Polymorphism and Encapsulation using relevant examples for each of them.
    - He then gave me a real world example in which I had to identify which part represented Abstraction, Inheritance, Polymorphism and Encapsulation. This was challenging but I really enjoyed answering it.
    - Then he asked whether I have studied DBS and OS. Being a EEE student, I did tell him that I did not study them yet and will be doing them in the following semester. He said that it's fine. (You don't have an option of DBS if you are a CS student. It's mandatory for you.)
    - Then we moved onto a DSA coding question. This was simple to solve in which I had to identify what was being done. It was a Dynamic Programming question. Do deal with corner cases as well!
    - The interviewer asked me if I had any questions for him. The interview lasted for around 1 hr.
- HR interview:
    - This was a very chill round.
    - I was asked to give a basic introduction about my profile.
    - He asked me about my previous internships mentioned on my resume. Know your resume well!
    - Most important question: "What do you know about Arcesium?" (Research about the company beforehand through its website)
    - I had to tell him where I had learnt the skills from and whether they were all from my coursework or I did it on my own.
    - I did ask him a couple of questions at the end I was curious about.
    - The interview lasted for around 20 minutes.

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Sources of Preparation

- InterviewBit: Solving topic wise questions
- GeeksforGeeks: Both for any kind of theory and questions
- Leetcode: Solving good questions and giving contests
- Youtube (Used only for certain topics): Playlists like Aditya Verma (for DP), Striver (for Graphs)
- HackerEarth: For some portions of theory
- Codeforces: Although I didn't use it too extensively for my preparation, but giving timed contests will really help you to clear coding rounds
- Company website: Know about the company (only after you get shortlisted for interviews)

Other Relevant Information

- Get started as soon as possible. I started in the beginning of May but will advise others to start from the beginning of the even semesters [2-2 (single degree) or 3-2 (dual degree)].
- Know your resume well enough. Do not lie in it. Get a resume reviewed from seniors.
- Do some projects to build your resume well.
- Build up good communication skills as it is very important. PS-1 helped me a lot in this aspect.
- DSA/Competitive Coding>OOP>DBMS = OS
- Start studying CS concepts like OOP (for all branches), DBMS (CS students) and preferred programming language specific concepts (eg. Static members, friend function, etc.) in between your preparation for coding round itself. Many people don't realize this and come under pressure later on.
- Go through the GFG test and interview experiences once before appearing for the coding rounds and interviews of that company respectively.
- In the interviews, ask questions for clarification. Interview questions are intended to be ambiguous and the interviewer expects you to clarify things.
- Don't get nervous in the interviews. The interviewers are your friends. Keep interacting with them and let the conversation keep going. Don't be silent.
- Be careful of what the interviewer is telling you and reply appropriately.
- Do get at least one mock interview done well before appearing in actual interviews.
- Have patience and faith in yourself!

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Sector: Banking & Finance

Name: *Suchismita Tripathy (2019A7PS0554P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- Online Test, Technical Interviews, HR
- 5 sections in online test:
  - 2 Coding questions: 30 minutes in total
  - Math MCQs
  - Advanced Programming Question: 45 minutes
  - Subjective: 2 questions on working in a group, and any project we've done in the past (15 minutes)
  - Math MCQs
- We were allowed to switch sections anytime, but the time left for one particular section after its completion was not added to the total time left to complete the whole test. The advanced programming question was the hardest section.
- The interviews had 4 rounds:
  - 1 Coding question + 1 Puzzle question
  - 2 Coding questions
  - 2 Puzzle questions
  - HR + I was asked some basic PnS questions here as well
- Not everyone had 4 rounds, some had only 3.
- The coding questions were standard and you had to convey the logic and writing incomplete code was accepted. Introduce yourself in each round.

Sources of Preparation

Past interview questions for Goldman Sachs found online (eg: GFG)

Courses and Certification

Some basics of Probability and Statistics, DSA

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Other Relevant Information

The interview process was hectic and you could be called for the next round anytime and it was not always clear who would be accepted/rejected based on the number of interviews they've had or the time between their interviews.

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Sector: Banking & Finance

Name: *Vighnesh N Ganesh (2019A7PS0131P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- Competitive coding round with mathematics questions and 2 hr questions. You have to be good in at least 3 sections out of 5.
- Then it will be followed by 3 rounds of interviews; few others were selected in 4 rounds however.

Sources of Preparation

Fifty Challenging Problems in Probability with Solutions, Book by Frederick Mosteller; intermediate level competitive coding; JEE main level mathematics

Other Relevant Information

In Interviews, show that you are a motivated person who is interested in the company. There is no need to solve all interview questions.

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Sector: Banking & Finance

Name: *Anshu Sharma (2018B2A80677P)*
Company: Wells Fargo
Profile: Data Analyst

Recruitment Procedure

- Online Test, Technical Interviews, HR
- **Test had 5 sections:**
  - Verbal and Reading Comprehension
  - Data Interpretation
  - Logical Reasoning
  - Quantitative Ability
  - 2 programming questions
- Switching between sections and questions was not allowed.
- All parts of the test were easy. However, it is important to maintain speed to finish all questions.
- **Technical Interview- Round 1:**
  - Tell us about yourself
  - Most of the questions were related to my resume. Got two puzzles, a few probs and stats problems and questions related to python, machine learning and PowerBI.
- **Technical Interview- Round 2:** This round was taken by a Senior Executive.
  - Tell us about yourself
  - The questions in this round were varied. I was asked about the NLP project that was mentioned in the resume in depth.
  - I was asked about some finance concepts like Forward contracts and time value of money.
  - The interviewer questioned me on regressions and probability.
- **HR Round:** It was a telephonic interview.
  - Tell me about yourself
  - Why do you want to make your career in the banking sector and as a Data analyst?
  - What are your long-term goals?

Sources of Preparation

Coursera (for Python, MATLAB)

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Courses and Certification

Probability and Statistics, Data Analytics, MATLAB

Other Relevant Information

Be thorough with your resume. Know everything on it like the back of your hand. Revise your projects and the courses that you have mentioned in your resume.

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Domain:

CHEMICAL

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Sector: Chemical

Name: *Rohini Sen Gupta (2019A1PS0711P)*
Company: Exxon Mobil
Profile: Summer Intern

Recruitment Procedure

- Resume Shortlisting, Group Discussion, Technical interview, HR interview
- Group Discussion:
  - 40 minutes duration.
  - General knowledge / Current affairs -based topic.
- Technical interview:
  - 30 minutes duration.
  - Majority questions based on resume. Focus on PS-1 project and academic projects. Multiple follow up questions based on what you answer. Questions from CDCs, related to the projects.
  - Questions on teamwork and leadership skills demonstrated, in clubs/departments.
  - Situation-based questions about workplace ethics.
  - Questions about interest in Exxon Mobil.
- HR interview:
  - 30 minutes duration.
  - Majority questions about self, family and interests.
  - Questions about PORs and roles in clubs/departments.

Sources of Preparation

- Revision of PS-1 project, academic projects done and some core CDCs.
- Referred to "Core Chemical Interview Questions" document prepared by the previous batch (2018).

Courses and Certification

Was asked questions from Chemical CDC 'Numerical Methods for Chemical Engineers', since my PS-1 project was related to it. No other subjects in particular.

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Relevant Information

- Should be thoroughly prepared with every portion of your resume.
- Should be prepared to answer what your task, contribution, learning and impact was in academic projects/internships.
- Should be prepared to answer what your role and impact was as POR-holder/member in clubs/departments.

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Sector: Chemical

Name: *Harsh Solanki (2019A1PS0670P)*
Company: HUL
Profile: Intern – Research & Development

Recruitment Procedure

- HR Google form, HireVue Interview, Technical Interview
- Google form had sections which consisted
- basic HR questions and Background. Properly mentioning details of your PS-1 project or any other projects will help.
- The HireVue interview consisted of 3 questions related to product research and development. 1 min was provided to prepare for each question and 5 min were allotted to record answers to the problem. HireVue interviews require quick thinking, allotted time to prepare should be utilized to answer questions in STAR format.
- Technical interview lasted 25 min, consisted of 2 panelists, both from the R & D department. Expect questions from your resume. In depth questions were asked from the PS-1 project and practical applications of fluid mechanics.

Sources of Preparation

Prepared PS-1 report thoroughly. Revised the basic fundamentals related to the project. Revising chemical CDCs

Courses and Certification

Questions are usually asked on Fluid mechanics and heat transfer. No other certification required as such.

Other Relevant Information

- Your answers need to convince the recruiter that you are the perfect candidate for this role.
- Practical questions regarding basic CDC fundamentals are usually asked. Don't mention too many CDCs if you aren't confident about them. Prepare at least 2 CDCs .
- Going through HUL's website and studying their work on sustainability is recommended.

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Sector: Chemical

Name: *Jayeesh Arora (2019A1PS0601P)*
Company: HUL
Profile: Research & Development Intern

Recruitment Procedure

- Shortlisting through Google form, HireVue Interview, Personal Interview(Technical+HR)
- Google form had 4 sections:
  - Personal Details
  - Academic Achievements, GPA(10th,12th, College), Internships, Projects, etc.
  - Details on activity extremely passionate about
  - HR based questions
- HireVue Interview was a recorded interview where the applicants were given 3 case studies and we had to send video recordings of ourselves solving those case studies. Each applicant is given 1 minute to go through the problem statement post which the timer starts on its own and you have 5 minutes to reply to the question in whatever manner you see fit. The problem statements were based on real-life situations in the industry and how you would solve them as an R&D executive for the company. You are also expected to submit your resume post this stage.
- Personal Interview was a mixture of HR and Technical Questions based on the applicant's resume
- Questions:
  - Questions on Internship and technical questions on work done during the internship.
  - Follow up questions from what you answer.
  - Questions on Projects pursued in Academia.
  - Why do you want to work for Unilever?
  - Why do you want to work in R&D?

Sources of Preparation

Own notes from courses taught during the semester. Project reports from internships and college projects.

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Courses and Certification

No specific course, just skim through your CDCs.

Other Relevant Information

- Given this is an R&D role most people will assume that you are expected to know your CDCs by heart but that is not true. You just need to know exactly what you did during your internships and also real knowledge is important.
- Knowing what is in the books is important but it is further necessary to know what additionally was taught by the professors out of the books and how you can utilize that knowledge in the industry when it comes to real-time problems in the industry.

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Sector: Chemical

Name: *Kumaresh Maji (2019A1PS0945P)*
Company: Hindustan Unilever Limited
Profile: Research and Development Intern

Recruitment Procedure

- **General Information Form** - It was a form where the questions mostly covered your achievements, strengths, etc; and also your general details about your schooling, grades, etc. Around 16 people were shortlisted based on their responses in the form for the R&D role.
- **Case Study Interview** - No interviewer was present but one had to record themselves live while answering the questions. Each candidate had 1 minute to read the question and prepare and 5 minutes to answer. There were 3 questions. As soon as 1 minute prep time gets over the 5 minute starts.
- **Interview** - The interview was both a HR and technical interview focussing a lot on your resume. One has to be thorough with whatever they mention in their resume, specifically their projects.

Sources of Preparation

- For technical questions - The slides of the CDCs taught in class.
- For case study - https://strategycase.com/case-interview-examples-2020-a-collection-from-mckinsey-and-others

Courses and Certifications

- The courses taught till that point in the semester play a great role. They focus a lot on the CDCs and relate the concepts taught to real world problems, so one has to have in-depth knowledge of the concepts.
- External certifications are definitely good for knowledge and personal development but did not play as such a significant role in my selection process. I had no certifications mentioned in my resume.

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Other Relevant Information

- It is very important to know your resume and one should be ready to deal with any questions that can come up from there.
- The questions start from your resume and as the interview proceeds questions start building up from your answers.
- For case study the questions depend on the role and ensure to end your answer by providing a summary of your points that you provide supporting your claim.
- Research about the company and what are the products and services it provides. The interviewers are always motivating you and they do help and provide hints to reach to the answer.

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Sector: Chemical

Name: *Aadarsh Dhoot (2019A1PS0900P)*
Company: JSW Steel Ltd.
Profile: Core Engineer Intern

Recruitment Procedure

- Recruitment procedure included Online test, GD and a final HR round. The CGPA cut-off was 7 2) The Online Assessment was of 90 mins and had Cognitive+Domain based Questions
- In the GD Round we had a Group Discussion on two topics - a) Work from Home b) Digitalization 4) Finally in the HR Round we were asked general questions about our future plans for higher studies, why we want to join the company, what we know about the company etc.

Sources of Preparation

- The official website of the Company
- YT videos on how to answer HR questions
- Though there wasn't any technical interview round still one must be thorough with his/her CDCs and also with the entire steel production process
- Resume

Other Relevant Information

JSW has 4-5 business verticals (Steel, Cement, Paint, Infrastructure, Energy & Sports), so make sure to read about each of these verticals in detail.

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Domain:

ET

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Sector: ET

Name: *Tapas Mazumdar (2018A8B40427P)*
Company: NVIDIA (NVIDIA Corporation)
Profile: Hardware Summer Intern

Recruitment Procedure

- Online Test, Technical Interview, HR Interview.
- Test had a total of 19 questions and the maximum marks was 50. Total time allotted was 50 minutes. The questions had weightage between 1-4 (inclusive) marks. The questions were divided into three categories:
    - Digital Electronics:
        - Concepts from Digital Design course,
        - Verilog and STA Analysis,
        - Memory architecture and hierarchy: RAM read-write cycle (specifically one question from depth of FIFO), Depth of RAM, Size of Tag, Index and Data bits in Cache, Types of Cache, Video Memory requirement to display x number of pixels with y bit color-coding, etc.
    - General Aptitude: Simple but tricky math questions which are commonly asked in aptitude like 'work' problems, combinatorics, pattern recognition, etc.
    - C Programming:
        - Basic knowledge of C and common algorithms is enough.
        - C programming questions were easy, mainly had basic problems related to pointer arithmetic and other simple concepts.
        - It was not a coding test, only the final output had to be answered (however, in previous years coding problems have been included).
- Aptitude section was moderately easy overall except for a few questions which were very tricky. Digital section had a good and challenging set of problems from all the topics previously mentioned.
- Time is a major constraint in the test so maintain a good speed and do as many questions as possible before the time runs out (in case there is no negative marking). Navigation between different problems was free and we could even change our answers any number of times before the final submission.
- Interview questions:
    - Basic introduction, hobbies, professional interests, past internships and courses done at university.
    - Follow-up questions based on what you answer.
    - A few verbal questions were then asked from Digital Design after which a set of 5

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questions were asked which had to be solved on Google Jamboard (the number of questions varied among candidates):

- Simple question based on predicting output of a combinational and sequential logic circuit (flip-flop and gates).
- Designing Mealy and Moore FSM for detection of a n-bit sequence.
- Riddle problem based on identifying a bag of coins with lesser weight than other bags doing minimum number of measures of weight (I did binary search based on weights). Follow-up problem had a variation in which you can take any number of coins from any bag and transfer among the bags but do the problem in lesser number of measures (similar problem can be found here: https://www.geeksforgeeks.org/puzzle-bag-of-coins/).
- Questions from C programming which were only concerned with basic knowledge like the ones asked in the online test.
- Design verification/debugging question where a digital circuit was given which gave incorrect output for a certain set of inputs along with which expected output was given and had to identify which wire(s) are shorted to either VDD or GND.

Sources of Preparation

- Digital Electronics:
  - Important Topics: Combinational/Sequential Circuits, FSM (Mealy-Moore), Flip-Flops, Counters, Pattern Detector Clock Divider, Synchronizers, Semiconductor memories (RAM, ROM, Cache)
  - References: Digital Design by Morris Mano; Digital Integrated Electronics by Taub, Schilling;
- Microprocessors:
  - Important Topics: RISC/CISC ISA, Addressing Modes, Basic R—>R, R—>M, M—>R, M—>M instructions with timing analysis in CPU cycles
  - References: Intel X86 Microprocessors by Barry Brey
- Verilog and STA Analysis (though Verilog was not asked but it is still important for a Hardware profile and might be asked in future):
  - Important Topics: Verilog operators, entities and architecture; Design of combinational and sequential logics, registers, memory, FSM; Types of modeling; Writing test-bench Timing paths; Finding setup/hold times; Checking and fixing setup/hold violations; Maximum operable frequency of circuit
  - References:
  - Verilog HDL by Samir Palnitkar; STA (http://www.vlsi-expert.com/2011/03/static-timing-analysis-sta-basic-timing.html)

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Courses and Certification

Digital Design, Basic Network Theory (Electrical Sciences), Microprocessors and Interfacing which would already be completed as part of college curriculum. Apart from that self-study of STA, Verilog, Memory architecture and hierarchy. Do practice from past year Digital Design papers again and you can also do problems from the following websites:

- https://academyera.com/digital-circuits-subject-wise
- https://www.vlsi4freshers.com/2020/02/static-timing-analysis-interview-questions.html
- http://ww25.gate-exam.in/cs/Syllabus/Computer-Science-Information-Technology/Computer-Organization-Architecture/Memory-Hierarchy-Cache-Main-Memory-Secondary-Storage?subid1=20221109-0311-470f-9513-65a4a59cfde0

Other Relevant Information

- Interview questions are generally easier than test questions. Even if you don't get the final answer correct due to some silly mistake, you should be able to understand and communicate your approach well to the interviewer. Be confident when you answer interview questions.
- The number of people clearing the online test is very few (~10%).
- NVIDIA generally has a CGPA cutoff of 8 or 8.5 so having a high CGPA is important.
- If you get selected, please consider doing the course on Computer Architecture in even semester. It is very helpful to build your hardware profile and also important for the work you would be doing in the internship.

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Sector: ET

Name: *Tushar Sardana (2019A3PS0260P)*
Company: NVIDIA Hardware
Profile: Hardware Intern

Recruitment Procedure

- **Online Test**
  - Questions on digital design, specially related to flip flops and their implementation in circuits.
  - C Programming questions – You have to find output of the given code. Specially prepare for questions on operators and pointers.
  - Aptitude and basic combinatorics based questions.
  - There were around 20 total questions to be solved in a period of 50 minutes.
- **Technical Interview**
  - Basic introductions and questions about the things written on the resume. Nothing in detail, just questions like what is this project about?
  - Programming based questions like simple searching and sorting. It is more important to explain your thought process and how you are approaching the question than just knowing the algorithm and getting the answer. You may be asked to only explain the logic without writing code.
  - You should be familiar with basic searching and sorting, nothing advanced is required. The CP course content was more than enough for the preparation.
  - Logic puzzles- Again, explaining the approach is important. Try explaining why your solution is correct or even incorrect. What parameters you are optimizing. What you might be missing. Just keep talking. I was asked the classic bridge crossing puzzle.
  - Questions based on flip flops, their application in counters, registers, frequency dividers, etc. and their timing and delay. I was asked to guess the circuit based on the given input and output, followed by further questioning like doing some modifications or adding some functionality.
  - Verilog – I was asked to implement the behavioral model of the previous circuit along with the test bench. You need to be prepared with basic Verilog; nothing advanced is required.
  - Interview was mostly verbal along with Jamboard for drawing circuits and writing code.

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Sources of Preparation

- Aptitude – Indiabix website.
- C Programming – Geeksforgeeks quizzes.
- Digital Design – Morris Mano and previous year GATE questions.
- Verilog – 'Verilog HDL' by Samir Palnitkar, Morris Mano for questions.
- Computer Architecture – GATE video lectures for topics like cache and memory organization and course slides.
- STA – http://www.vlsi-expert.com/
- Electrical Sciences – Course textbook.

Courses and Certification

Digital Design, Computer Architecture, STA (Part of ADVD) and Basic ES.

Other Relevant Information

- Just keep talking to the interviewer about what you are thinking and doing. They are usually friendly people and will try to guide you to the solution. This is even more important in online or call based interviews where they can't see your sheet.
- Also, try asking your friends in other universities about what questions were asked in their tests if it happens before yours. If the company focused on one particular topic in their test, there is a good chance that you may be questioned on similar topics.

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Sector: ET

Name: *Avi Tanwar (2019A8PS0332P)*
Company: Texas Instruments
Profile: Analog Internship

Recruitment Procedure

- Online Test, Technical Interview, HR Round
- Test format would be told in TI PPT. It had 3 sections for us: (all timed)
    - Analog - 45 mins, 20 Questions
    - Digital - 45 minutes, 20 Questions
    - Aptitude - 30 minutes, 20 Questions
- You can choose to attempt only one of analog or digital or both but aptitude is a compulsory section. Navigating between questions of a particular section was allowed but not between sections, as all sections were timed.
- Technical Interview - is typically around 30 to 60 minutes long, depending on the interviewer and the candidate's response. There were 2 technical interviews for some people. They started with my introduction and some questions on projects done by me, then about the courses done and the rest of the questions were based on the profile I was interviewing for (Digital/Analog).
- HR round was telephonic where they asked my preference for digital/analog profile as I had appeared for both the interviews.

Sources of Preparation

- **ES - Textbook by Bobrow**
- **Microelectronics Circuits - Class notes, Lectures by Dr. Razavi**
- **DD - Textbook by Morris Mano and Michael Ciletti, Class notes**
- **Verilog - Book by Samir Palnitkar**
- Microprocessors and Interfacing - Class Notes
- Signals and Systems - Class Notes
- Control Systems - Class notes
- **Previous year GATE problems for practice.**

Courses and Certification

The discipline CDCs are the most important courses which the interviewer asks questions from.

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Other Relevant Information

Being confident in your interview helps a lot. Stay calm and be prepared on your basics. The interviewer will give you hints if you are stuck, but that would help you only if you are strong at the basics of each subject. In case of an online interview be prepared with some sheets and a pen for rough work and ensure good internet connectivity.

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Sector: ET

Name: *Devansh Tanna (2019A3PS0158P)*
Company: Texas Instruments
Profile: Digital

Recruitment Procedure

- Test, Technical Interview
- Test consisted of 3 sections (We had to choose from Analog or Digital or both):
    - Analog –
        - Most of the questions were based on OpAmps (from ES) and some were based on frequency response(from MuE) and Microelectronics (MuE).
        - From microelectronics, there were questions to find time-constant of buffers connected, finding Gain and Rin/Rout of circuit. And from OpAmps Circuits with Passive Components, there were questions of finding node voltages, output waveform, etc.
    - Digital –
        - There were questions from ADVD, CompArch, and Digital Design. All the portions of Digital Design are important.
        - Although, we hadn't studied digital part of ADVD, so I can not say more about it, but there were questions related to timing of gates and STA (Static Timing Analysis).
        - There were also questions about RAM from CompArch. And knowledge of Verilog would be useful for some questions
    - Aptitude – Questions from this section were pretty easy. There were questions about finding the next number in series, related to Ratio, finding answers from paragraphs, etc. It was at the level of NTSE like exams.
- Analog Interview:
    - They started with simple RC Circuit and I was asked to find output transient response and following that up, they kept putting Capacitors and Resistors in circuit and I was asked find output response in each circuit
    - One questions from Microelectronics, that was to explain feedback mechanism in CMOS Differential Amplifier and how it increases gain as compared to other differential amplifier
    - Last question was to find the output waveform of an RC circuit with input as a square waveform, with a high time constant.
- Digital Interview:
    - Tell us about yourself

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- Discussed one of the projects from resume
- All the questions were asked from Digital Design, I was asked to design a circuit based on some problem with combinational and sequential circuit like Buzzer, Mod9 Counter, Clock Divider, Clock Comparator, designing OR gate from Half Adder, Designing N-input OR gate from NOR gate, some feedback circuits like latches and flip flops
- Fan-in and Fan-out voltage characteristics

Sources of Preparation

- Analog –
  - KVL, KCL, RC circuits, Network Theorem (Thevenin and Norton), Superposition Theorem, Nodal and Mesh Analysis.
  - Basics of MOSFET and single stage amplifier, Frequency Response, Feedback and Differential Amplifier from Microelectronics Course.
  - Basics of OpAmps up to integrator
  - Books – ES: Textbook; MuE: Sedra and Smith, Razavi
- Digital –
  - All the portions of Combinational and Sequential Circuits from Digital Design course, like decoder-encoder, mux-demux, flipflops, counter, latches, registers, FSM, ASM.
  - Digital portion of ADVD is also important, which can be done from http://www.vlsi expert.com/p/static-timing-analysis.html.
  - Books – DD: Textbook (Morris and Mano); ADVD: http://www.vlsi-expert.com/

Courses and Certification

- Electrical Science, Microelectronics Circuits, Analog Electronics(only basics)
- Digital Design, ADVD(Digital Part), CompArch(Basics)

Other Relevant Information

Interviewer will be very friendly, just don't panic while answering. And most importantly, think loudly, discuss whatever you are thinking with the interviewer. He/She will definitely help you out when you go wrong. And go by an intuitive approach rather than keep solving the mathematics behind it.

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Sector: ET

Name: *Homi Raghuvanshi (2019A3PS0155P)*
Company: Texas Instruments
Profile: Analog Intern

Recruitment Procedure

- Eligibility: Branches - EEE/ENI; CGPA - 7 & Above.
- Technical Test: It had three timed sections- Digital (45 min, 20 ques), Analog (45 min, 20 ques) and Aptitude (30 min, 20 ques, Compulsory section). Navigation was allowed between questions of the same section only.
- Technical Interview: Interview rounds of TI focus a lot on Basic Fundamentals. I had two interviews, one for Digital and the second one for Analog because I was shortlisted for both profiles based on performance in the test. On average, interviews are 30-35 min.
- Digital Interview:
    - I was first asked to introduce myself and tell about my projects and was questioned on that.
    - I was questioned on frequency divider concepts, counter circuits and types of counters. He also asked about my interests in Analog and was questioned on CMOS circuits and how you can make an inverter using it.
    - The interviewer shared a google jam board where I was supposed to draw the circuits and diagrams and explain the concepts.
- Analog Interview:
    - First I introduced myself and was asked about things I'm interested in and passionate about. The interviewer had prepared slides on questions he would ask.
    - The first problem was on the concept of Kirchhoff Laws of voltage and current. I was asked to narrate my thinking process and the steps I'm taking to solve it. The second question was a puzzle.
    - It was followed by some behavioral and situational questions on team projects, planning and implementation. The interviewer also asked me about my prior experiences in tackling similar situations.

Sources of Preparation

Make sure your fundamentals are strong; KVL, KCL, RC circuits, MOSFETS, CMOS etc. If you know all the important concepts of your CDCs, you are good to go. The internship prep talks organized by various cells of the college are really helpful for detailed tips. SAC Internship season Talk on ET: Presentation Link

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Courses and Certification

Electrical Sciences, Micro Electronics Circuits (Analog) and Digital Design (Digital).

Other Relevant Information

- Be You! The interviewers take out time to take your interviews not to hear the cliche answers but to know more about you, your personality and your analytical skills. They need people who are smart enough to deal with any problem.
- The resume is an important document for the interviews and final shortlisting, and make sure you get it reviewed. It's you who decides the flow of the interview.
- Whenever you are solving any technical or aptitude problem, tell them about how you are trying to approach the problem with your steps even if you are not sure and very confused. Demonstrate your analytical skills.
- When you answer situational behavioral questions just place yourself in the scenario and think about how you want to approach, for example, practically or ethically or both.

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Sector: ET

Name: *Jagrit Lodha (2019A3PS0165P)*
Company: Texas Instruments
Profile: Digital Intern

Recruitment Procedure

- CGPA Cutoff - 7.0
- Recruitment Procedure - Online Test, Technical Interview (1 or 2 rounds)
- Online Test -
    - There were 3 sections - **Analog** (20 questions ~ 45 minutes), **Digital** (20 questions ~ 45 minutes) and **Aptitude** (20 questions ~ 30 minutes).
    - One could choose to give only Analog or only Digital or both depending on their interests. But the Aptitude section was compulsory.
    - A lot of questions from Buffers and Op-Amps were asked in the Analog section, which was not expected by many.
- Students were shortlisted either only for Analog Interview or Digital Interview or both based on their scores.
- Technical Interview -
    - *Digital Domain* - A few minutes were spent on discussing my resume and about my favorite courses, etc. Then most of the questions were asked from Digital Design (which I said was my favorite), starting from simple ones and moving on to more complex ones. The interviewer was really helpful and gave hints in case anyone got stuck on a particular question.
    - *Analog Domain* - Most of the questions were based on RC, RL and RLC circuits and drawing their time-response while they kept on adding more components to the circuit. It is advisable to go through Op-Amps as well.
- Some students were called for a Second Technical Interview post which the process ended. (Some who were called for a 2nd Round weren't selected, while others were selected just after 1 Round). No HR Interview was conducte

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Sources of Preparation

- Class notes and Textbooks for the second-year courses should be more than sufficient.
- Youtube playlists/ Online resources for certain third-year topics like Op-Amps, Timing Analysis, Verilog, etc. (Though not required to be done in great detail)
- Discussing among your batchmates and seeking advice from seniors is also a must.
- Solving previous year GATE papers might also come in handy.

Courses and Certification

- Analog -
  - ES is undoubtedly the most important (especially RLC Circuits).
  - Basics of ConSys and SaS (important topics include Bode Plots, Nyquist Plots, Stability Criteria)
  - MuE and AnE (basics of MOSFET Topologies and studying Op-Amps is recommended)
- Digital -
  - Almost EVERYTHING from DD (both combinational and sequential circuits)
  - Certain topics from ADVD (Static Timing Analysis) and knowledge of Verilog is appreciated.
  - Basics from MuP only if you have time, not that important.

Other Relevant Information

- Be thorough with your resume. They might ask you to explain in detail any point you've written.
- Although an HR Round was not held for us, it is better to be prepared for questions like Job vs MS, knowing about the company background, etc.
- During the interview, think aloud and let the interviewer know about your approach to any problem. They are more interested in that rather than the final answer.
- Start preparing well in advance and all the best!

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Sector: ET

Name: *Kavyesh Talwar (2018B5A30911P)*
Company: Texas Instruments
Profile: Analog Design Intern

Recruitment Procedure

- Online Test, Technical Interview, HR Round
- Online Test had three Sections: Analog, Digital and Aptitude. Either one or both of Analog and Digital to be attempted. The Aptitude section is compulsory.
    - Analog: Most questions from Electrical Sciences. Some questions from Microelectronic circuits and Analog Electronics . This section is lengthy and requires practice and speed.
    - Digital: Most questions from Digital Design, few questions from Microprocessors and Interfacing. Few questions on output of Verilog codes. This section was shorter. Many questions were factual.
    - Aptitude: Basic Math questions.
- Technical Interview:
    - You will be evaluated on the basis of your approach to the problem, not the final answer. It's important to keep the interviewer in the loop on what you're thinking, they generally will give you tips if you go wrong /are stuck.
    - Try to approach the problems intuitively, rather than mathematically.
    - Questions Asked:
        - First Order RC Circuits - Time response, Time constant.
        - Resistive Op-amp Circuit – Input Impedance, Virtual Short
        - Circuit Concept, Gain.
        - Cascode Amplifier – Output impedance, Small signal analysis.

Sources of Preparation

- Curriculum of CDCs is more than enough
- Electrical Sciences: Textbook by Bobrow/Sadiku
- Microelectronic Circuits: Razavi Video Lectures/Textbook
- Analog Electronics: Textbook by Sedra Smith
- RC Circuits (Frequency response): YouTube Lecture Series by Prof. Chembiyan T

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Courses and Certification

Important topics from different courses are listed below :

- Electrical Sciences:
  - Thevenin, Norton, Superposition Theorems
  - RC Circuits: Both Time and Frequency Response
  - Basics of 2nd order RLC circuits (Underdamped/Overdamped/etc)
  - Basics of AC Circuits
- Microelectronic Circuits:
  - Characteristics of MOSFETs and BJTs
  - Basic Amplifier stages: CSA, CGA, CDA, Cascode
  - Bode Plots
- Analog Electronics:
  - Concept of Negative Feedback, Virtual Ground Concept
  - Basic Op-Amp configurations: Upto Integrator/Differentiator Circuit
- In rare cases, you can also expect very basic questions from other EEE CDCs, like Control Systems and Signals and Systems.

Other Relevant Information

- Interview questions are much easier than the online test. Don't panic on seeing the difficulty level of online test.
- You are not expected to know everything in an interview. Interviewer will generally ramp up the difficulty if you answer the basics very well, which can also consist of topics you would be studying in later semesters.
- Simulations are a great way to learn about the behavior of circuits. This can be done on the LT Spice app, which you will be introduced to in Microelectronic Circuits.

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Sector: ET

Name: *Neel Vipulbhai Tailor (2019A3PS0152P)*
Company: Texas Instruments
Profile: Digital Electronics Intern

Recruitment Procedure

- Online Test (3 sections):
  - Analog section: Basic Electrical Sciences, Electronics devices, Signals & Systems, Control Systems, Microelectronic Circuits
  - Digital section: Digital design, Microprocessor and Interfacing, CMOS
  - Inverter Characteristics, Logic Gates, Design Flow, Static Timing Analysis (STA), Layout basics, Verilog and VHDL, Basic C programming.
  - Aptitude section: Basic mathematics and logical reasoning.
- Technical interview: Questions asked on the following topics were to test the depth of our understanding. The topics asked were: Digital design, Static Timing Analysis, Verilog and VHDL, CMOS Inverter Characteristics.

Sources of Preparation

- Analog section: Textbook by Bobrow/Sadiku (ES), Razavi Video Lectures/Textbook, Class Notes (MuE), Sedra Smith/L.K. Maheshwari (MuE)
- Digital section: Textbook (DD), NPTEL video for Static Timing Analysis, vlsi expert.com for STA, Morris mano HDL sections (Verilog)

Courses and Certification

Digital design is the only required course for digital Intern. Others can help but are not necessary.

Other Relevant Information

Questions are designed to see our approach to a problem, way of thinking and our basics of necessary fundamental subjects. Reaching the correct answer is not the primary goal in an interview.

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Sector: ET

Name: *Puneet Miglani (2018B5A30894P)*
Company: Texas instruments
Profile: Electronics engineer intern

Recruitment Procedure

- Online Test and Technical interviews
- The test had 3 sections:
  - Analog
  - Digital
  - Aptitude
- Test was easy. However, it is important to maintain speed to finish almost all questions. All sections had individual timers. Going between sections was not allowed.
- Questions: Basic RLC circuits, transistor, op-amp based and buffer based circuits.

Sources of Preparation

- The courses at BITS are sufficient, even overkill but you should know the basics well for courses like microelectronic circuits, digital design, ADVD, and Electrical sciences.
- Very brief introduction and basics of Signal and system. (These courses will help you both for the test and the interview)

Other Relevant Information

They will test your knowledge for the above-mentioned subjects thoroughly and present you with tricky questions . It is very important to think out loud in the interview and share your thought process the whole way through.

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Sector: ET

Name: *Ram Goyal (2019A3PS0239P)*
Company: Texas Instruments
Profile: Digital Intern

Recruitment Procedure

- Online Test:
  - The test had 3 individually timed sections- Analog (20 questions, 45 mins), Digital (20 questions, 45 mins), Aptitude (20 questions, 30 mins).
  - The selection criteria of any profile was not dependent on how well you did in the other.
  - All questions were MCQ with no negative marking.
  - The Analog questions were mostly based on RC, RLC and OpAmps with diodes connected. A few questions were also on the basics of MOSFET-BJT.
  - The Digital questions were moderately easy, mostly based on DD basics- Boolean functions, combinational circuits, sequential circuits, Flip Flops, FSM, counters, 3-4 questions on Verilog and surprisingly 3-4 questions were on DRAM-SRAM.
  - The aptitude part was very easy and even had a comprehension passage like in English exams.
  - The analog section was the lengthiest whereas the digital and aptitude sections, one could do it in time if managed properly.
- Technical Interviews**:**
  - Around 18 were shortlisted for Digital interviews and 30 for Analog interviews. Since I was shortlisted for both profiles, I had both analog and digital interviews.
  - In my analog interview, the interviewer started by asking me what all subjects I've studied. Then he asked me to plot the node voltage and current in an RC circuit if the voltage source is such that it has been 1V for a long time and suddenly it's switched off. He then added another capacitor in parallel with the resistor.
  - The last question was on calculating the gain of the CS stage with a source degenerated with an ideal current source.
  - The Digital interview started with him asking me about universal gates and then how to make a 3-input NAND gate from a 2-input NAND gate. He extended the question to 4,5,6-input NAND gates and asked me to generalize the formula of how many 2- i/p NAND gates are required for n-i/p NAND gates.
  - He also asked me to calculate the critical path delay for all the circuits above and then asked me for a general formula for critical path delay in forming n-input NAND gate from 2-i/p NAND gates. He then asked how to form an OR gate with

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2:1 mux. Then he asked me how to create a freq-by-2 divider.
    - At the end, he asked me a puzzle:
        - 10 people are standing in a row wearing either a white or black hat randomly. Any person can only see the colors of the hats of people ahead of him (The last person can see 9 hats, the second last can see 8 hats…).
        - Everyone has to guess their own hat color starting from the 10th person to the 1st. Only 1 person is allowed to say the wrong color, rest have to be correct. Formulate the strategy.
        - When I was not able to crack the puzzle, he also gave me hints to think white as 0 and black as 1 and think of XOR operation.
    - 2 students from digital and around 3 from analog also had to give another technical interview. I was shortlisted for the 2nd technical interview in digital, so my interview started with the interviewer asking me about my project.
    - He then asked me to think of a circuit that works as a buzzer (There are 3 inputs and 3 corresponding outputs. If input A is high first then output A is high and outputs B,C are low irrespective of the status of input B and C. Similarly, if input B is high before A and C, then output B is high and A,C are low).
    - He then asked me about various frequency dividers with 25% and 75% duty cycles and how to generate them. He then connected a mux at the output and asked me how to control that mux. The answer was Gated latch.
    - He then asked me if I had any questions for them and I inquired about the working of TI.
- The next day, 5 digital and 4 analog offers were made.

Sources of Preparation

- Digital Design- Class Notes, questions from Morris Mano
- If possible, STA and Verilog from online resources
- Electrical Sciences- Fundamentals of Electrical Ckts by Sadiku
- Microelectronic Circuits- Razavi Sir playlist on Youtube

Courses and Certification

Digital Design, Electrical Sciences, Verilog (for online test), Microelectronic Circuits

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Other Relevant Information

- Projects don't matter that much for Summer Internships, fundamental concepts do, so keep your basics clear.
- Be confident in the interviews. The interviewer tries to help you, just try picking up on whatever hints he gives.

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Domain:

IT

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Sector: IT

Name: *Aman Ali (2018B5A70952P)*
Company: A.P.T Portfolio
Profile: Software Engineer Intern

Recruitment Procedure

- **Coding test** (60 mins, Hackerrank):
  - This was a design-based coding test, not a typical DSA one. You had to design an interpreter for a language, the grammar for which they provided in detail.
  - Only C++ language was allowed in both the test and interviews as this company primarily uses this language in their work. Apart from the performance and memory efficiency, the quality and the structure of the code was also evaluated by the company.
  - Overall **Difficulty level: Medium.**
- **Technical Interview 1 (40 mins)**: The environment was Hackerrank.
  - I was asked a simple Dynamic Programming question first, I had to fully code it and then run it on the platform as well and make sure I get the correct output.
  - After that I was asked some theoretical questions on C++ core concepts and STL like how vectors (dynamic arrays) work in C++ (questions about reallocation and amortization). Average and worst-case running time complexities for operations and internal data structures used in C++: map, unordered map, etc.
  - After that I was asked easy coding questions on Linked List operations which I had to code and run on Hackerrank as well.
  - **Difficulty level: Easy.**
- **Technical Interview 2 (1.5 hrs):** The coding environment was again Hackerrank.
  - First question was again a medium level dynamic programming question: minimum cuts to split a string such that each substring is a palindrome. I coded a DP solution and ran it. It worked fine but the interviewer asked me how I would further optimize it. I told him the approach and then we moved on to another question.
  - He asked me the famous Edit Distance DP problem and I told him my approach on the whiteboard. He didn't ask for code this time.
  - Then I was asked some core programming concepts like memory segments in a program, the work of each segment and so on.
  - He also pasted some C++ code snippets on the platform and asked me their outputs.
  - Mostly these questions were on memory allocation using new, malloc and use of

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delete keyword.
- Then he asked me some C++ OOP questions like about virtual functions and polymorphism.
- He then asked me another coding question based on bit manipulation which I had to code and run.
- **Difficulty level: Medium.**

Sources of Preparation

- Practicing famous coding questions on InterviewBit, Leetcode is enough to do the coding questions.
- You should be really good at writing accurate c++ code and also debugging it on the spot.
- This was the first company that asked to live-run and debug the code rather than just using a google doc for pseudocode.
- OOP with C++, core C++ concepts and STL are essential. In BITS, the OOP course is in Java so you'll have to practice C++ OOP on your own.
- In my experience, the 40+ OOP questions on InterviewBit and some YouTube videos from freecodecamp about OOPs with C++ (a night before the interviews) was enough.

Courses and Certification

BITS DSA course, BITS OOP course. Read up on amortized analysis online, as I don't remember if it was done in DSA.

Other Relevant Information

Strong DSA and coding expertise in C++ is all you need to ace this company's interviews. Make sure to clearly explain your approach on the whiteboard before moving on to the code, and use proper variable names. Good Luck!

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Sector: IT

Name: *Harsh Kumar Suman (2019A7PS0076P)*
Company: Arcesium
Profile: Software Developer Intern

Recruitment Procedure

- Online Round: Then the online test was conducted on Hackerrank. The test had the following format:
  - 15 MCQs (20 minutes) Mathematical questions were asked
  - 15 MCQs (15 minutes) CS conceptual and output based questions
  - 2 Coding questions (45 minutes) : I don't remember the questions but one was based on level order traversal of a binary tree and other was based on bitmasking.
  - The test was of a moderate level and being fast is a must to solve most of the questions. Switching between questions was allowed, but it was prohibited to change the sections.
- Interviews :
  - Round 1(45 mins) : I was asked just one dsa problem .Find if a given string can be represented from a substring by iterating the substring "n" times . Expected time complexity O(n). Full working code was expected(You'll have to run the code on several test cases)
  - Round 2 (30 mins): I was asked 1 dsa problem with a few dbms concepts.I was asked about ACID properties. DSA Problem - Lets define the degree of an array as the maximum number of times any number is repeated in the array. For e.g. for array {1,2,2,3,2,1} degree is 3 as 2 is occurring 3 times. Now find the smallest subarray such that the degree of that subarray remains same as that of the original array.Full working code was expected. (Sol. : Use hashing)
  - Round 3 (50mins): I was asked everything from projects to dsa,oop,dbms, sql,basics of c++ and java. I'll note down the questions I remember.
    - Few basic questions on my PS1 project as well as my SOP.
    - Virtual functions in c++ and its internal implementation. I was expected to know about virtual pointers and virtual tables.
    - Virtual functions vs pure virtual functions
    - Convert a binary tree into a balanced binary search tree.
    - An SQL query . I wrote the query using left outer join, then he asked me to use right outer join and solve the same problem.
    - All types of joins. He gave me two sample tables and asked me to tell the output when each join is used on it

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    - About Kernel, I said him that I am not aware of it and he was fine and changed the question
    - How does a JAVA programme run? (It was taught in initial lectures of OOP course)
    - What makes JAVA programmes run on every machine independent of their OS.
    - OOP questions. He gave me a code and I was asked to predict the output. Code was based on the concepts of inheritance.
    - How does insertion in heap work? (Code was not asked, only the logic)
- Round 4 (15mins) HR round : Just the general HR questions
    - Discussion about my family, city, etc
    - What do you know about Arcesium?
    - Why Arcesium?
    - What's your takeaway from the past interviews?
    - What problems do you think you might face in the software world and how would you overcome it?

Sources of Preparation

- GeeksForGeeks - Must Do Coding Questions for Product Based Companies
- InterviewBit
- Leetcode
- Codeforces (not very relevant for interview dsa questions, but helps in clearing online tests)
- DBMS - DBMS_notes, DBMS RoadMap - by Love Babbar
- OOP - OOP Notes, Object Oriented Programming CheatSheet - by Love Babbar

Other Relevant Information

- Start early, preferably in your 2-2 (for singlites) or 3-2(for dualites)
- Complete at least one among GFG and Interviewbit.
- Suggestion for competitive programmers - never underestimate the importance of oop and DBMS. Suggestion for non-competitive programmers - DSA is very very important.
- Work on your speaking skills (PS1 can be really helpful here). Having a good speaking skill makes you feel confident in interviews.
- In interviews , understand the questions well and ask multiple questions to clarify the edge cases(like can we have negative numbers, can we have repetition of numbers, etc)
- As the internship season starts, start company wise preparation. For e.g. : DE Shaw and Arcesium ask a lot of DBMS, OOP,basic language questions, Uber focuses more on graphs,

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Google asks only DSA in interviews, Goldman Sachs can ask probability questions and puzzles as well, etc.

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Sector: IT

Name: *Chaarvi Bansal (2018B1A70913P)*
Company: Bloomberg
Profile: Software Engineer Intern

Recruitment Procedure

- **The Recruitment Procedure:** Online Test, Technical Interview I, Technical Interview II, Senior Engineer Round, HR Round.
- **CGPA cutoff:** 7, open to B.E. CS only
- **Online Test:** 16 MCQ's and three coding questions to be solved in 90 minutes.
    - The MCQs were based on OOP and DSA. There were some language-specific (C++) questions too.
    - Coding questions were Leetcode level easy to medium.
- **Interview Round:** Check out Bloomberg internship experiences on GeeksForGeeks and Leetcode discussion section.
- **Technical Interview I:** After a brief introduction, I was given a link to Hackerrank and was asked to implement a slightly modified version of the LRU Cache problem. A lot of follow-up questions were asked regarding algorithm optimization and time complexity. The session concluded with a brief discussion on STL container implementation and time complexity.
- **Technical Interview II:** After a brief discussion on resume and projects, a Hackerrank link was shared. A modified version of the Word Break problem was asked. Some questions related to OOP like run time polymorphism and inheritance in C++ were also asked.
- **Senior Engineer Round:** This round was more of a fit/motivation round. It focused on resumes, projects in particular and concluded with an open-ended design problem. The interviewer asked me to just explain the logic and the time complexity.
- **HR Round:** This one was like all other HR Rounds. General questions like Why Bloomberg, What are your expectations etc. were asked.

Sources of Preparation

- Leetcode
- GeeksForGeeks
- Cracking the Coding Interview (Detailed solutions given in the end provide a very good idea of how to tackle a problem during an interview)

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Courses and Certification

Focus on courses like DSA and OOP. Bloomberg hardly ever asks DBS questions. Focus on design-based problems, hashing, and dynamic programming.

Other Relevant Information

- It is very important to communicate with your interviewer at all times. They are there to help you, so don't panic if you get stuck while solving a problem. Just tell the interviewer why and where you are stuck, and they will help you.
- During my interviews, there was a lot of focus on how I approached a question. Therefore it also matters how clearly you are able to express your thought process.
- Prepare a really good answer for Why Bloomberg. They focus a lot on such fit/motivation questions.

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Sector: IT

Name: *Mansi Agarwal (2018B3A70762P)*
Company: Bloomberg
Profile: Software Engineering Intern

Recruitment Procedure

- Resume shortlisting, Online Test, Technical Interviews, HR round, Senior Manager Round.
- The online test was reasonably easy with more than enough time and was a mixture of MCQs and coding questions.
- There were two technical interviews of an hour-long each. The first interview was a DSA system design question with a follow up question of implementing hashmap from scratch along with other follow-up questions on the basics of DSA. The design question was a mixture of browser history and LRU cache question from Leetcode. The links are as follows:
    - https://leetcode.com/problems/design-browser-history/
    - https://leetcode.com/problems/lru-cache/
- The second interview was a standard DSA coding question and had follow-up questions on time complexity and optimisation of the solution. The link of question is as follows:
    - https://leetcode.com/problems/word-break-ii/
- The third round was an HR round that was 30 minutes in duration. It consisted of self
- introduction, questions like Why Bloomberg, state your ideal team, and other behavioral
- questions.
- The fourth round was the Senior Manager round which included intensive discussion on the projects listed in the resume.

Sources of Preparation

Leetcode, Interviewbit, GFG

Courses and Certification

DSA, OOP

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Other Relevant Information

- Doing Bloomberg tagged Leetcode questions will help a lot.
- Along with DSA and OOP, it would be better to prepare questions on the language of your choice. For Eg: OOP principles implementation in C++, virtual function etc.
- Also, it is better to prepare for the HR round by looking up the company's website as it gives you lots of brownie points.
- The last two rounds are more about why you like the company and how you fit in the company than just discussing the projects you did till now.

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Sector: IT

Name: *Aantriksh Pandya (2019A7PS1131P)*
Company: Cisco
Profile: Software Engineer Intern

Recruitment Procedure

- **Online Assessment - 60 minutes**
  - 15 MCQ Aptitude, Networks/Cryptography(A few basic questions), Output of Code Snippet
  - 2 Coding Questions (Greedy and DP)
- **Technical Interview**
- **Round 1 -- 50 minutes**
  - Explain your project (brief)
  - Basic questions and definitions from OOP and DSA
  - Find the output of a C code snippet (Needed to know Macro)
  - Write code in C to reverse a linked list, find a duplicate element in an array, calculate x^y
  - Note: Did not actually need to run the code
- **Round 2 – 30 minutes**
  - Truncating bits from both ends of a number
  - How to find Kth element from the end of a linked list
  - Behavioural question: “What will you do if you cannot meet a deadline?”
  - Asked a puzzle
- **Round 3 – 30 minutes**
  - Tell me about yourself
  - A detailed discussion of my project
  - How to remove an element from a linked list
  - Questions on Binary Search Tree and how to remove the root node
  - Find which k consecutive elements have maximum sum in an array
- **HR Interview**
  - Just some basic information gathering questions.

Sources of Preparation

Reviewed key OOP concepts, and Leetcode.

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Courses and Certification

OOP, DSA

Other Relevant Information

- Asked “Tell me about yourself” every round.
- Asked if I knew Networks after every round. It was optional since we haven’t had that course yet. I conveyed that I had read up some basics and was questioned accordingly.

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Sector: IT

Name: *Aditya Anil Poptani (2019A7PS0086P)*
Company: CISCO
Profile: Software Engineer – Network/Embedded/Application Development

Recruitment Procedure

- Resume Shortlisting, Online Test, Technical Interviews, HR Interview
- Resume Shortlisting: Students having a CGPA above 6.5 were allowed to sit for the Online Test
- Online Test: it consisted of two sections
    - **Section 1:** 15 MCQs based on the topics of Networking, Operating Systems, Code Output, Logic & Aptitude.
    - **Section 2:** 2 Coding Questions both of Medium Level difficulty.
- Technical Interviews: There were 3 Interviews conducted
    - **Interview with Senior Engineer:** The interviewer asked application-based questions on the courses like Data Structures and Algorithms, Object Oriented Programming and Networking. Basically, the applicative knowledge of concepts was tested.
    - **Interview with Manager:** The Resume was discussed extensively at first covering all the aspects of Work Experience and Projects. Next, couple of situational based questions were asked.
    - **Interview with Business Executive:** Three easy coding questions were asked to be coded on some IDE. Also, one could use a whiteboard to discuss the approach and dry run it on simple test cases. In short, the interviewer was rather interested in the approach then on the correct output.
- After each round, there was a shortlisting. So only those who were shortlisted were allowed to sit for the next interview.
- HR Interview:
    - The HR manager asked all the details concerning the Internship (Job Roles, Location Preferences, Stipend, etc.) to just check whether the details were clear to the interviewee.

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Sources of Preparation

- Coding Round – Leetcode, Interviewbit
- Computer Science Topics – Class Notes, GeeksForGeeks

Courses and Certification

- Data Structures and Algorithms
- Object Oriented Programming
- Database Systems
- Basics of Networking and Operating Systems

Other Relevant Information

Strong hold on the concepts of Computer Science is advised. One must be aware how the concepts are applied in the industry

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Sector: IT

Name: *Aditya Mukund Thaokar (2020H1030132P)*
Company: Cisco
Profile: Network/Embedded/Application Development

Recruitment Procedure

- **Written test:**
  - 1.5 hr time, 15 MCQs (OS, CN, OOPS, aptitude) and 2 moderate level coding questions.
  - On Hackerrank platform
  - One was an expressive words question of string and the other one was graph based..
  - Try to solve them at least partially and make sure the code you have written is yours only. C++ was available this time.
- **Technical Round:**
  - Tell me about yourself.
  - Give me an overview of all the projects mentioned in your resume. Explain any one of them, which technologies you used. What are the data structures you implemented in it ?
  - Explain the approach and Code (Just the required functions) on any text editor:
    - Add 1 to a number which is represented in a linked list and return the updated linked list. I have explained the 2 approaches and also written the functions. Then she asked me to dry run it with some test cases. She was satisfied with the logic.
    - Given a set of characters, generate its power set. E.g. for set {a,b,c,} : powerset will be: [{}, {a},{b},{c},{a,b},{b,c},{a,c},{a,b,c}]. Initially I was stuck for some strings, but after a hint, I covered the logic. One logic was by using recursion. Another logic is the Binary. e.g 0 1 1 means {b,c} approach to implement LRU cache
  - Explain All the OOPS concepts. Some Language based questions: What are the types of constructors in C++? (My preferred language)
  - From OS: What is semaphore, deadlock and its conditions.
  - Solve the hourglass puzzle: Given two hourglasses of 4 minutes and 7 minutes, the task is to measure 9 minutes. I will suggest going through all the puzzles given on GeeksForGeeks.
- **Managerial Round**
  - This round mostly revolved around my projects, he asked the questions like the

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challenges you and your team faced and how you resolved them
    - Have you done testing on the project, what are the testing methods you have applied?
    - This round was 35-40 mins long.
- **Director Round**
    - Similar project related questions were asked.
    - My elective was Objective Oriented Analysis And Design (OOAD). So, he asked questions on Singleton Design patterns with examples.
    - What is SAAS (Software As A Service) , microservice (these are based on my web development project). What languages have you used in the backend ?
    - Explain router, switches, routing protocols.
    - In which field/domain you are interested to work in and why ? Where do you see yourself in the next few years ?
- **HR Round**
    - This was a 5 minute round.
    - Why Cisco?
    - Information regarding location preference, Internship availability was asked.

Sources of Preparation

GeeksForGeeks must do questions, Leetcode, HackerRank, GATE knowledge of OS, CN and DBMS

Other Relevant Information

- Work on some good projects in your courses and have an in-depth understanding of the technologies used in those projects.
- OS, CN and DBMS basic concepts should be crystal clear. For Cisco, focus mainly on CN and OS.
- Be confident while attending the interviews. Make sure you are aware about what the company does and the profile it is offering beforehand.

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Sector: IT

Name: *Anshal Shukla (2019A8PS0363P)*
Company: Cisco
Profile: Software Engineer

Recruitment Procedure

- Online Test: Platform - HackerRank. It consisted of two sections.
  - **MCQ:** (15 questions) (DSA, Networking, OS, OOP, 10 questions) (Basic Reasoning, 5 questions) [Level: Easy]
  - **Coding Section:** (2 questions) [Level: Moderate]
  - **Tips and Tricks:**
    - Cisco does not allow you to attempt ques in C++, which is preferred by most of the students. You will have an option to code in either C, Java, Ruby or Python.
    - I'd suggest attempting objective type questions first as scoring in these is generally easier.
    - Maintain a good speed from beginning, make sure you go through all the questions at least once. You have a total of 60 minutes with no individual timer for each given section.
    - HackerRank can reveal your program output. See if you can put them to use.
- Interview: Platform – WebEx
- I had 4 interviews. My first interview was a technical round (45-50 minutes) followed by a manager round (45-50 minutes) followed by another technical round (70-75 minutes) and finally concluded with an HR round (15-20 minutes).
- Be prepared with an introduction (mention your projects, achievements, past experience and a brief journey). Tell them things in such a way that makes them curious about you and cross questions on your strong areas.
- **Generic Advice:** Brush up on topics like DSA, OOP and Computer Networks.
- Cisco is known for its network equipment and expertise in networks so while other companies might not focus on your networks knowledge; you can expect some questions about networks in Cisco interviews.
- All interviews proceeded with the interviewer asking me to introduce myself. Here you have an amazing opportunity to drive the interview. I always used to try to divert my interviews more towards my project as I was not very confident about my DSA skills.
- 1st Interview (Technical Round): After a brief discussion about my projects and past experiences the interviewer asked me about the tech stacks I'm familiar with, followed by

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basic questions on sorting algorithms. He then asked me to code two basic string manipulation problems.

- 2nd Interview (Manager Round): He started by asking me what courses I'd like to do in future and why, he then asked me to describe the OSI model and some more questions about basic computer networks. He then asked me about any problem which I faced while developing a project and how I solved it. I described to him a problem I faced while hosting using Docker, the following question was then based on Docker. He then asked me some basic questions about microprocessors followed by a question on linked list, but he didn't ask me to code it.
- 3rd Interview (Technical Round): This was toughest of all, the interviewer dug deep into one of my projects and then asked me to design a custom RPC. He then asked me to design a graph database, he used to prove my response as inefficient by comparing it to twitter. I was able to satisfy him after a repeated iteration and with some help. He then asked me questions about AVL, BST and logic for a graph-based question. The interview ended with me coding a question comparing two Binary trees.
- 4th Interview (HR Round): This was like any other HR round, basically taking my location preferences and whether I plan to pursue future studies.

Sources of Preparation

- I did some practice from leetcode, just a few easy and medium problems of arrays, linked lists, trees, stacks & queues.
- I expected questions about computer networks so I referred to the top 40 networking questions asked in interviews on Interview Bit.

Courses and Certification

The interviewer asked me if I did a course on computer networks, I told him that I haven't but have some knowledge about it. He also asked me whether I did a course on Microprocessors, I had it as my CDC in 2-2, so I told him about that.

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Other Relevant Information

- Interviewers are cool. Just talk to them in an easy-going, respectful, polite, and friendly manner. - Try to steer the interviewers to your strong points as soon as you get the chance.
- Be prepared for “Tell me about yourself”; the answer to this question dictates the whole interview flow. The interviewer is as clueless as you about what they are going to ask, therefore, throw some open ends in your answers so that they cross-question on those things.
- Think that Cisco is just another common company and if not this, then there are 100 more companies that are more than willing to take you in. It really helps to be unstressed and cheerful. The interviewer also wants to see something fresh since they are taking interviews from morning to evening.

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Sector: IT

Name: *Apoorv Badar (2019A7PS0060P)*
Company: Cisco
Profile: SDE Intern

Recruitment Procedure

- Online Test (1hr) had two sections:
  - 15 MCQs based on CS Fundamentals (Computer Networking,DSA etc.) and Aptitude.
  - 2 coding questions : One based on bit manipulation (https://codingcompetitions.withgoogle.com/kickstart/round/0000000000050ff5/0000000000051185) and the other one was finding the minimum number of swaps needed to balance the parentheses.
- 4 Interviews (3 technical and 1 HR). Basic questions like
  - Tell me about yourself.
  - Describe your PS-1 Project.
  - Puzzles like https://www.geeksforgeeks.org/puzzle-10-balls-in-5-lines/ (Refer GFG)
  - Questions based on threading (The interviewer explained the topic and asked questions on the same)
  - HR Round had basic questions about strengths and weaknesses, willingness to relocate and location preference etc .

Sources of Preparation

- Practice questions from Leetcode, InterviewBit etc. (General preparation for the internship season, though DSA wasn't really asked for Cisco)
- Puzzles from GFG.

Other Relevant Information

Be thorough with your resume .

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ector: IT

Name: *Ayush Agrawal (2019A7PS0038P)*
Company: Cisco
Profile: Software Engineer

Recruitment Procedure

- Online Test, Technical Interviews, HR Interview
- **Round 1: Online test**
  - It had 2 sections: 15 MCQs and 2 coding questions
  - 15 MCQs based on OOP, DSA, OS, Networking, DBMS.
  - Test was conducted on HackerRank platform for a duration of 90 mins.
  - 2 coding questions were of medium-hard level where in brute force solution passed more than half of the test cases
- **Round 2: Technical Interview**
  - Brief introduction
  - Explain the approach to know whether a linked list is a palindrome.
  - Some pointers and bit-manipulation questions
- **Round 3: Managerial Interview**
  - Explained all the projects in the resume
  - The interviewer gave some scenarios and asked me how I would react in that situation. For example, “How will you react if your teammate makes a blunder in the code in the middle of development?”
- **Round 4: Technical Interview**
  - Brief Introduction
  - Implementation of circular queue.
  - Questions based on multi-threading
  - Puzzle
- **Round 5: HR Interview**
  - It was a 10 minute interview where HR asked me about my location preferences, plans for future studies, and availability.

Sources of Preparation

Questions for the coding test can be prepared through leetcode and interviewbit. Generic puzzles can be found on Geeksforgeeks which are asked in interviews.

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Courses and Certification

Basics of DSA, DBMS and OOP should be thoroughly studied before interviews.

Other Relevant Information

Although Cisco is a core networking company, one can inform the interviewer that he/she has not completed the networking and OS course, hence the interviewer will not ask questions based on those courses. Be thorough with your resume and explain your projects briefly.

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Sector: IT

Name: *Ayushmaan Sharma (2019A7PS0143P)*
Company: CISCO
Profile: Software Engineer - Network/Embedded/Application Development

Recruitment Procedure

- Online Test, followed by 4 rounds of interview - Technical interview, Manager interview, Executive interview, and a final HR interview.
- The online test included two coding questions + 15 MCQs. The coding questions were of Medium Hard level, with the catch being that one couldn't use C++ in the second question. The MCQs were based on mental ability and CS fundamentals.
- The technical interview involved in-depth discussion about my resume projects and my internships, especially about a Product Management internship that I had done. This was followed by a simple question about constructor initialization and then a coding problem about linked lists. The interviewer expected a linear time complexity.
- The Manager round involved discussion of my projects and internships once again. The interviewer was also interested in my extracurriculars and we discussed them for some time. This was followed by a brief discussion about networking equipment. I was also asked about the reasons why I wanted to join CISCO.
- The executive round involved an in-depth discussion about my PS-I project. The interviewer also asked me about my favourite course and then a few questions related to that. Then I was asked a few coding problems and questions about data structures to be answered verbally.
- The HR round was a simple affair, I was asked to run through my resume. Then I was asked about why I wanted to join CISCO. This was followed by questions about future plans, location preference, etc.

Sources of Preparation

I used AlgoExpert and LeetCode primarily to practice coding questions, also I had participated in Codeforces rounds occasionally since the start of 2nd year. I also used WilliamFiset's videos to clear data structures and graph theory fundamentals, along with consulting GeeksForGeeks for last minute OOP revision.

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Other Relevant Information

CISCO interviewers were very friendly and conversational. They wanted to know more about the candidate than is obvious by looking at the resume. So, this is something that should be kept in mind, along with being aware of the reasons why would you like to join CISCO.

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Sector: IT

Name: *Garvit Sadhwani (2018B5A30329P)*
Company: Cisco
Profile: Software Engineer- network/embedded/application development

Recruitment Procedure

- Online test: Total 17 questions:
  - 2 coding questions: Given a string of parenthesis ([]{}()) return the minimum number of swaps required to balance the string. The second was to find a number such that the maximum of XOR of all elements of an array with this number is minimum.
  - 15 MCQs based on aptitude and CS fundamentals.
  - The test was for 90 minutes in total.
- Interview Round 1 (technical):
  - Discussion on my projects, followed by 2 DSA questions.
  - The interviewer asked me how I would implement an auto-complete feature, followed by some discussion on the same.
  - Given a 2D matrix of 0s and 1s sorted row-wise, return the maximum number of 1s in any row. For this, he asked me to open a text editor and code. This was followed by 1 or 2 basic questions on OOP, OS, and networking.
- Interview Round 2 (managerial):
  - A short introduction followed by a discussion on my resume. The interviewer gave me this puzzle: Maximize probability of White Ball.
  - This was followed by a DSA question: 1. Write a function that returns the decimal representation of a segment of the binary representation of a given integer. This had some follow-up questions.
- Interview Round 3 (managerial): Discussion on my resume and projects. The interviewer asked me to describe the implementation of the following:
  - A continuous stream of numbers is incoming, ranging from 1-32000. Given a memory limit of 4kb, determine if any number is repeated.
  - This was followed by 2 DSA questions:
    - Write a code for inorder traversal of a binary tree.
    - What happens when a node is deleted from a binary search tree. Not code, just the concept.
  - The interviewer then asked me why I want to join Cisco and why not some other company, let's say Microsoft/Google with the same pay scale and perks.
- Interview Round 4 (HR): HR only asked me my location preference and whether I'm aware

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of the compensation.

Sources of Preparation

- DSA: Interviewbit, Leetcode, and GFG. Youtube for difficult concepts.
- OOP: GFG and youtube.
- OS: Disciplinary Elective for the current semester.
- Networking: Frequently asked questions on GFG and basics on javatpoint.
- Puzzles: Interviewbit and GFG.

Courses and Certification

Focus on DSA and OOP.

Other Relevant Information

- Practice as much as possible, keep doing questions on interviewbit/leetcode/gfg. Look up some puzzles and practice them as well, especially before your interviews.
- Interviewers are generally friendly and will help if you get stuck at any point. Be prepared for any question that they can possibly ask you. Be confident and never bluff.
- Talk to your seniors as much as possible, they will give you a comprehensive approach methodology.

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Sector: IT

Name: *Geetagya Manuja (2019A3PS0303P)*
Company: CISCO
Profile: Software Engineer

Recruitment Procedure

- Online Test:
  - 1 stacks question (minimum number of moves to balance bracket strings E.g. {([]}))
  - 1 heap question (could be solved by recursion - brute force).
- Interview – 4 rounds
  - Technical Round: Choose appropriate data structure and write lookup, add, modify functions for a database of students containing name, roll number, rank, access the nth – last element of an array, handle the error if n is out of bounds, reset the nth bit of a given integer.
  - Managerial Round: 20 min discussion on previous work experience (PS 1) [asked me to explain Diffie Hellman Key Exchange] , 2 gfg puzzles , discussion on various products of cisco, various roles available.
  - Director Round: 30 min deep discussion on previous work experience (PS 1) [Why was the project needed, what was your role in it, what were the things which were out of your capacity to implement at that point of time, how did you handle them] , how would you store a list of 1000 numbers when you are constrained by space, 1 simple probability question based on binomial theorem.
  - HR Round: Brief discussion on previous work experience (PS 1) , projects, general HR questions - location preference, etc.

Sources of Preparation

- Hackerank (for python basics)
- InterviewBit
- Leetcode
- GeeksforGeeks
- https://docs.google.com/document/d/1VlMqQPIoSULRZCBVEVAu3mEnzu6kQb3x5Rd0XtW13Ro/edit

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Courses and Certification

- Computer Programming – 1-1
- Data Structures and Algorithms Specialization – UC San Diego – Coursera

Other Relevant Information

- Have some meaningful questions to ask to the interviewer at the end of the interview, it shows your interest in the company.
- I did not take any proper CS electives yet (EEE) so they did not ask things from OS, OOPs, Networking, etc. - you need to convince them that you will take them up in the upcoming semesters.
- Know the meaning of every keyword on your resume - try to steer the interviewer's questions towards what you know from what you don't know.
- Think before you answer anything, try not to get stuck on any cross-question, be comfortable – don't make the interviewer feel uncomfortable trying to make you comfortable.

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Sector: IT

Name: *Hardik Ashish Jain (2019A3PS0318P)*
Company: CISCO
Profile: Software Engineering Intern

Recruitment Procedure

- There were 5 rounds Online Test, Technical interview, Managerial interview, Executive interview, HR
- CGPA cutoff: 6.5
- Online Test:
  - The test had 2 sections: 15 MCQs + 2 coding questions (1 easy, 1 medium difficulty)
  - Test duration was 60 minutes
  - The MCQs comprised Aptitude, basic Computer science, Networking, Encryption and Hashing related topics.
  - Coding question 1: It was quite similar to balanced parentheses problem, with an additional requirement that if there are equivalent closing and opening brackets but the expression is unbalanced then return the minimum number of swaps necessary to make the expression balanced.
- Technical interview:
  - All the other 4 rounds took place in a single day.
  - Technical interview went for around 1 hour.
  - Brief introduction of myself; linked list reversal problem, some OOP basics and questions based on projects mentioned in my resume were also asked.
  - At the end, the interviewer asked me if I had any questions for him.
- Managerial interview:
  - Round went for around 50 mins.
  - Brief introduction of myself; some OOP basics and questions based on projects mentioned in my resume were asked similar to past rounds.
  - Unlike the technical interview round, this round delved a lot deeper into my projects; was asked to draw flowcharts, give suitable explanations why a particular choice was made, what was the most challenging part among others.
  - At the end, the interviewer asked me if I had any questions for him.
- Executive interview:
  - This was a tough round for me as I wasn't prepared for questions asked in this round.
  - After a short introduction, the interviewer asked me about my interests in the

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technical domain.
    - Be highly confident on the domain you specify as your interest because he would grill you nicely and put forth pointed questions on that specific domain.
    - I for my part answered IoT, Website Development. He promptly asked what particularly in Iot, why do you find that the most interesting aspect?
    - For my case he presented a series of questions:
        - If a smart coffee machine is installed in an office what benefits will it give to the company?
        - Will highly secure facilities like DRDO, ISRO install such smart coffee machines, if not why?
        - How can you prevent data breach from taking place through your smart coffee machines networks? (I replied that though encryption of our data and hashing out passwords, cyberattacks can be made ineffective to a certain extent. He didn't seem convinced and replied read on micro/ nano segmentation)
        - The interviewer also asked what do you prefer working alone or in a team and why?
        - At the end, the interviewer asked me if I had any questions for him.
- HR interview:
    - It lasted for about 15 mins. No prior preparation is needed for this round.
    - The interviewer asked me how did the other rounds go; what are your expectations; are you interested in higher studies; how comfortable are you with relocation; what is your preference order for location (Pune, Bangalore, Chennai)
    - The interviewer explained the special PS-2 clause that would kick in if I were to accept a PPO offer.
    - In the end she asked do you have any questions for me? I asked about the company culture; the various projects they work upon among others.
    - Next day, by noon, the list of selected candidates was released.

Sources of Preparation

For the online tests, I practiced at Leetcode and InterviewBit. GeeksForGeeks CISCO archives are one of the best places to familiarize yourself with questions asked in Technical, Managerial rounds.

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Courses and Certification

A crash course on DSA was conducted by Jobsy which PU arranged for. I also audited the Algorithms specialization on coursera by Stanford to understand concepts better in my summer vacations.

Other Relevant Information

Be confident in the projects and skills you have mentioned in your resume. There are many friends of mine who couldn't solve the coding problem in the online test but passed it by hardcoding the test cases :)

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Sector: IT

Name: *Harsh Butani (2019A7PS0022P)*
Company: Cisco Systems India Pvt. Ltd.
Profile: Software Engineering Intern

Recruitment Procedure

- Recruitment Procedure: Online Test, Technical Interview Rounds and HR Round
- CGPA Cutoff: 6.5
- Online Test: The test was of 60 minutes duration. It had 15 MCQs and 2 Coding questions. The MCQs consisted of questions on Mathematics, Cryptography, and CS fundamentals. One of the 2 coding questions was quite easy (Brute force worked). The other question didn't support C++ language so I managed to partially solve it using C.
- Interview Rounds:
    - Round 1: The interviewer asked me about the Quicksort algorithm. Then he asked me 3 easy DSA questions: Reversing a Linked List, Removing duplicate characters from a string and Finding angle between hour and minute hand.
    - Round 2 (Manager Round): The interviewer asked me about my projects and the difficulties faced while working on them. He also presented different situations and asked for my response towards them.
    - Round 3: The interviewer presented a situation where a global variable (say x) is initialized to 0 and two threads are doing {x++; print(x)}. He asked whether we can predict the output or not. He also asked to come up with a mechanism such that no number is printed twice. The interview ended with him asking me about the Cisco products I'm familiar with and any improvement that is needed.
    - HR Round: The interviewer just asked for my location preference and my domain of interest.

Sources of Preparation

Codechef, Codeforces, Leetcode, Geeksforgeeks, Interviewbit

Courses and Certification

OOP, DSA, DBS

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Other Relevant Information

- Focus on DSA. Basics of DBS and OOP will suffice. Starting early always helps.
- You should be able to dictate your thought process to the interviewer. They are more interested in how we approach problems rather than getting to the right answer. Moreover, listen to their feedback carefully. They are there to help us.
- If you're asked something about a subject that hasn't been done, then feel free to inform the interviewer about the same.
- Prepare a few questions from your side to ask the interviewer in the end, if he asks for.

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Sector: IT

Name: *Harshit Raj Lohani (2019A7PS0061P)*
Company: CISCO
Profile: Engineering - Web/Software

Recruitment Procedure

- The recruitment procedure: Online Test, 3 Technical Interview Rounds and 1 HR Round
- CGPA Cutoff: 6.5
- Online Test:
    - The test consisted of 15 MCQs and 2 coding questions in 60 mins.
    - MCQs were mainly focused on C programming and OOP with a few Computer Networks and OS questions.
    - Coding questions were heavily based on dynamic programming and graphs. However, brute force solutions were enough to get one shortlisted.
- Technical Interview:
    - Round 1: Round 1 was mainly focused on problem-solving. I was asked 4-5 standard coding questions involving graphs and dynamic programming. A few questions that were asked were Lowest Common Ancestor, Number of ways to traverse a 2D array and Number of Trailing Zeros in N!. A puzzle question was also asked similar to https://www.geeksforgeeks.org/puzzle-mislabeled-jars/.
    - Round 2: Round 2 was focused entirely on my resume and projects and was taken by a team manager. The interviewer asked me situational questions regarding work ethics and project management. He also asked me to plan a trip for 20 people and discuss what I need to keep in mind to make it a successful trip.
    - Round 3: It was a technical round and was taken by a senior developer. He asked me questions related to OS and Networking and how we can correlate them with real-world problems. The questions were tough but he only wanted a simple explanation and not the code. A basic awareness of OS and networking and a strong understanding of Data Structures and OOP was expected.
- HR Round: HR asked about relocation and preferred working station. No actual questions were asked.

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Sources of Preparation

I practiced coding questions from Leetcode, InterviewBit and Codeforces. The Jobsy mentorship classes were also very useful. Going through the GeeksForGeeks CISCO interview archive is also helpful.

Courses and Certification

No additional courses are required. A strong understanding of DSA and OOP is expected. Questions were mostly asked from standard algorithms.

Other Relevant Information

Going through the GeeksForGeeks archive is important to prepare for the interviews. Since the interview rounds can go for up to 10 hours, patience and composure are important. Having awareness of Cisco's goals and a networking project can help in interviews. Be prepared for "Why Cisco?" questions.

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Sector: IT

Name: *Mayank Jain (2019A7PS0141P)*
Company: Cisco
Profile: Software Engineer Intern

Recruitment Procedure

- CGPA Cutoff: 6.5
- Online Test, 3 Technical Interview Rounds, 1 HR Round.
- Online Test: 15 MCQs based on CS Subjects, HTTP status codes and cryptography + 2 coding
- questions
    - Q1) - Number of swaps required to balance parenthesis with 3 types of brackets. (),[] and {}.
    - **C++ wasn't allowed. Only C, Java and Python.**
    - Q2) - https://codingcompetitions.withgoogle.com/kickstart/round/0000000000050ff5/000000000000 51185
    - Brute force was passing all test cases. Languages Allowed - C/C++, Java, Python.
- Interview Rounds: 4 rounds
    - Technical Interview 1: Started with a brief discussion on projects. Then asked 3 coding questions.
        - https://www.geeksforgeeks.org/remove-duplicates-from-a-sorted-linked-list/
        - https://leetcode.com/problems/remove-duplicates-from-sorted-list-ii/
        - https://leetcode.com/problems/merge-k-sorted-lists/
    - Managerial Round: Discussed about my projects and what I learned from them. Focussed a lot on behavioral and team-work skills. Be prepared with specific instances from your internships/projects.
    - Director Round: Went deep into my resume since one of my projects was related to networking. Asked a lot of questions on language internals like memory management and allocation in C and the compilation process.
    - HR Round: General questions like Why Cisco, location preference and plans for higher studies.

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Sources of Preparation

Leetcode, Interviewbit, GeeksForGeeks.

Courses and Certification

DSA, OOP, DBMS

Other Relevant Information

- Start practicing DSA as soon as possible on platforms such as Interviewbit, Leetcode, etc.
- Regularly participate in contests for timed practice.
- Go through GFG Archives of the company before going in for all your coding rounds and interviews. Many of them asked repeated questions. If possible, ask your friends from other colleges that have already had their tests.
- Be familiar with the syntax of at least one other language (Python or Java) if you use C++. Some questions can be more easily solved in those and it saves time.
- In coding rounds, code the brute force approach if you aren't able to come up with the optimal one. Often the test cases are weak and it passes enough cases to get you shortlisted.
- Also prepare CS Core subjects like OOP, DBMS and know about the working of your language of choice. You can expect a few questions on these in almost all your interviews.
- Dont lie on your resume and be thoroughly prepared with your projects. You will be grilled on everything that is mentioned on it. Also prepare in advance for the HR round.
- Be very confident and calm while giving interviews, but don't be confidently incorrect. When taking a guess, mention that from your understanding of the subject you think it should be so and so. Interviewer looks more at your way of approaching the question and thinking ability. Speak out loud while you think through the question.

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Sector: IT

Name: *Patel Darsh Rajesh (2018B4A70532P)*
Company: Cisco Systems India
Profile: Software Engineer

Recruitment Procedure

- Resume Shortlisting, Online Test, Technical Round, HR
- Online test was conducted on HackerRank and consisted of 2 sections:
    - Coding Question (2): One related to bit masking but was made easy because of the weak test cases, so even brute force worked, though it shouldn't have.
    - I tried a constructive approach knowing that brute force won't work if it will pass some test case and accordingly, I could improve on that to pass maybe 80% of the testcase.
    - But again, because of the weak test cases it passed every test case.
    - Another was a famous balanced parenthesis problem with a twist to find the swaps to make it balanced; a constructive algorithm worked for 9/10 test cases.
    - MCQs (15): A few basic questions related to DSA, and few related to networking.
    - Everyone scored almost even in MCQS, so coding questions were the deciding factor. Questions were not something you might have solved before so coming with a constructive solution helped.
    - This also depicts a scenario which you will encounter in many coding rounds, as the test cases could be weak. So, if you are not able to come up with something that in theory should solve the problem, go for the next best approach.
    - Getting maximum test cases correct should be your priority. One thing about the coding question was that the balanced parenthesis problem didn't allow use of C++ while coding. In my case, I solved it using Python. So, try to get to know at least two languages from C++, Java, and Python as these are the most common. Switching between questions was allowed.
- We had a total of three technical interviews. Every one of those rounds had a few things in common:
    - Tell us about yourself (Introduction)
    - Follow up questions about the projects you worked on.
    - Round 1 and Round 2 had one DSA question each. Both questions were quite easy. One about linked lists and other about bit masking.
    - Some DSA questions like how stack and heap work, what are B+ trees, application of trees.

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- Some interviewers will ask about OS and Networking. If you don't know about it, you can politely deny saying that it hasn't been taught to you yet.
- Puzzles were asked to some of the candidates, and in some situations questions like you want some data organised in some manner and want to have certain functionality which data structure could be the best choice for it
- A few HR questions were also asked in these 3 rounds, like what if Microsoft offered you a software development role tomorrow, what have you heard about Cisco etc.
- Round 1 and Round 2 were each one hour round related to technical questions and discussing briefly about a project.
- Round 3 was entirely about your resume, 30 min discussion about what you have done in the past, what you are passionate about, what experiences you have and how well can you explain what you have done.
- HR round had some general questions like how your interviews have been, which role you prefer at cisco, will you be able to relocate etc.

Sources of Preparation

GFG, Leetcode and InterviewBit would be the three major websites for interview prep. Try to solve maximum interview bit questions as possible before the internship season. And for preparing any subjects like DSA, OOP, DBMS you can always use GFG.

Courses and Certification

SDE interviews will generally cover DSA, OOP and DBMS. Preparing these well will suffice.

Other Relevant Information

- Coding rounds are generally the one barrier which is difficult to cross as if the rounds are easy then chances are the company will segregate based on CGPA, and if it's difficult then also the same.
- So, doing competitive programming or even solving coding rounds questions will go a long way and will also be helpful for placement season.
- Write only those things in your resume about which you can talk at lengths (at least 10-15 mins) be it technical side or explaining in layman's terms. And if you have already sent your resume to some companies, try to at least have a basic understanding of that topic as

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it's always better to tell the interviewer that you only know the basics rather than being quiet for a while.

- Interviewers will give you hints along the way if you don't know something, so try to be calm and take them along with you on the entire process of how you may have solved/figured out a way to solve something.

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Sector: IT

Name: *Lakshit Jain (2018B4A30886P)*
Company: Cisco
Profile: SDE

Recruitment Procedure

- Online Test - The test was of 1 hour, with 15 MCQs and 2 coding questions. MCQs included questions on aptitude, programming and networking. The coding questions were medium to hard.
- Interviews - There were four rounds.
    - The first round was technical, it lasted for about an hour. One question was on math, another included both math and programming. Then one question was to code the given problem. I was also asked to create a binary search tree with the given input.
    - The second round was based on resume , and it also lasted for about an hour. We mostly discussed the projects and internships done.
    - The third round was the executive round. The interviewer asked some questions about data structures, then he asked questions on C language, data allocation and pointers. Then we discussed what field I want to explore and where I want my career to be. This round lasted for about 50 mins, the questions were done in the first 15 mins, then our discussion took about 35-40 mins.
    - The last round was the HR round. This was a short round where we had to share our experience and some HR questions were asked. Then he asked for my preference of location and we discussed the internship.

Sources of Preparation

- Complete DSA, and practice competitive coding from any CP website like Leetcode, Interviewbit etc.
- Read the articles on memory allocation, pointers, puzzles, math in programming etc. on GFG.

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Courses and Certification

The interviewer asked if I had done DSA,OOP,OS and because I have a maths degree too, I was asked about the courses done in Math like graphs and networks etc.

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Sector: IT

Name: *Preyansh Agrawal (2019A7PS0052P)*
Company: Cisco
Profile: Software Engineer – Network/Embedded/Application Development

Recruitment Procedure

- There was a coding test followed by 4 interview rounds.
- Test had 2 Sections:
  - First section had 25 MCQS based on Networking, CS fundamentals and Quant.
  - Second section had 2 coding questions and one of the questions did not have an option to code in C++.
  - Coding test questions were in the easy – medium range
- First interview round:
  - More or less DSA based. I was first asked to give an overview of my internships and then I was asked 3 questions.
  - First question was about removing duplicate characters from a string.
  - Second question was reversing a linked list (iteratively and recursively).
  - Third question was finding the angle between minute and hour hand on a clock.
- Second interview round was the Manager round:
  - I was first asked questions on my resume and asked to explain my internships in depth. Then we also talked about my projects.
  - In the end he wanted to know whether I was able to apply the knowledge gained by the courses done in my college in the projects I am working on.
- Third interview round was an Executive round and the interviewer was very friendly:
  - He directly jumped into one of the internships which we found interesting.
  - He also asked me questions related to C,C++ as well as went deep into my resume. Overall it was a chill round and it was just a conversation.
  - He had also asked me if I knew about networking but I said I only have elementary knowledge so he moved ahead.
- The HR round was very short and was just about HR getting to know me and my location preference etc. They wanted to make sure I know about the company and the stipend they will be giving.

Sources of Preparation

My major sources were Leetcode and Interviewbit for practicing DSA questions. I used

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GFG for revising OOP and DBS questions.

Other Relevant Information

- You should be confident while sitting in the interview and think of it like having a conversation with the interviewer.
- You should always do some background research about the company and ask questions about it in the end.
- Be thorough with your resume and be ready for counter questioning based on the points mentioned in your resume or what you answer to them.

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Sector: IT

Name: *Priyansh Kedia (2018B2A40733P)*
Company: Cisco
Profile: Network Embedded Application Development

Recruitment Procedure

- Pre-placement Talk, Resume Shortlisting, Online Test, Technical Interviews, HR Interview
- Test had 17 questions:
  - 15 were multiple choice type questions based on problem solving and basics of OS and OOP, and the other 2 questions were coding questions.
  - The test was easy overall, however it was important to ensure that you don't waste a lot of time on multiple choice questions.
  - After passing the coding test, you are eligible for the technical interviews.
- Technical Interview 1:
  - Was asked about myself, followed by 3 DSA questions. 2 of the questions were fairly easy to answer, unlike the remaining one.
  - The third question was unsolvable and was just for the interviewer to know what I did on getting stuck (Went on for about 1 hour).
- Technical Interview 2:
  - After the basic introduction, discussions about work experience on resume started, involving questions which involved deep knowledge of system and operating systems, and how kernel works.
  - This round ended with a DSA question. (Went on for 1 hour).
- Technical Interview 3:
  - This round started with a great discussion of how I manage multiple internships and jobs at once, followed by high level questions about system design and architecture.
  - Specifically I was asked to design Amazon Elastic Beanstalk. This interview tested my knowledge of Operating Systems, System design, system architecture and more.
  - This round too ended with a DSA question. (Went on for 1 hour).
- HR Round: Basic introduction about myself, and my plans for higher education. I was also asked for my preference order for the locations to join for the internship tenure.

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Sources of Preparation

- DSA, Personal Projects, Internships
- Distributed Systems (MIT Youtube), Operating systems lectures, OOPs (MIT Youtube), DSA (GFG, Leetcode).
- GFG archives for Cisco

Courses and Certification

Interns were asked about DSA and basic OS questions.

Other Relevant Information

You should be thorough with the skills and work experience mentioned in your resume.

Sector: IT

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Name: *Raghav Chaudhary (2019A7PS0082P)*
Company: Cisco
Profile: Software Engineer – Network Embedded Application Development

Recruitment Procedure

- Online coding Round:
  - It contained 15 MCQs based on predicting output of code, networking, and aptitude.
  - 2 coding questions were there and in one of the questions C++ was not allowed; just Python, Java, C were there in that question.
  - Coding Questions were of easy-medium difficulty and some students who didn't solve both the questions were shortlisted for interviews.
- Tech Interview 1:
  - Basic things like intro, explain all your projects were asked.
  - 2 DSA Questions were given to solve. They just asked algo in one of the questions and told me to code the other one without using any inbuilt function.
  - One of the questions was to eliminate duplicates from a string and the other one was to find the angle between minute and hour hand of the clock for any given time.
- Tech Interview 2: Just Resume was discussed and some basic DSA algos were asked. They just asked to verbally explain the algo and I didn't code in this round.
- Managerial Round: Resume and all the projects were thoroughly discussed and I was asked several DBMS and one DSA questions (didn't code just explained)
- HR Round : Basic things about salary and PS2 clause were told to me in this round and location preference was asked.

Sources of Preparation

InterviewBit topic wise DSA questions and some of the selected leetcode questions, watched Aditya Verma on YT for DP prep

Courses and Certification

DSA and DBMS were asked.

Other Relevant Information

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I gave some wrong answers (in DBMS) in one of the interviews because I didn't revise it thoroughly so even if you don't know the answer don't lose your cool. Just stay confident and take a stand.

Sector: IT

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Name: *Raghava Kasyap Kristipati (2019A7PS0087P)*
Company: Cisco
Profile: SDE

Recruitment Procedure

- Resume Shortlisting, Online Test, Technical Interviews, HR
- Test had 2 sections:
  - CSE & Aptitude – Questions were asked from OS, CN, Basic aptitude, Basic Web Development.
  - Coding Questions – 2 questions were asked in this section.
- Interviews:
  - There were 3 rounds of technical interviews and a HR round. All the interviews started with introducing myself.
  - In the first-round questions were asked based on garbage collector, hashing, C++ core concepts (i/o streams, pointers & references).
  - The second Round was mainly based on projects. Different questions based on implementation, debugging and frameworks used in the project were asked.
  - In the third round I was given a question based on designing a data structure and was asked to give the time complexity of various operations on that data structure. Few HR based questions were also asked in this round.
  - In the fourth round the HR of the organization interacted with us. Asked some questions about the company itself, about their products, their competitors etc and finally asked about the location preference.
- Clearly explaining your idea was of utmost importance for getting selected to the next rounds. The interviews were based more on working with the interviewer to reach the answer.

Sources of Preparation

- To pass the coding round one must have grip on all basic data structures and algorithms.
- Interviewbit would give the best foundation required for learning DSA.
- After interviewbit one must concentrate on solving questions randomly on leetcode without looking at the question tags so that we can find which data structure and algo to use in that particular problem.

Courses and Certification

No subject as such. CSE course curriculum would be more than enough.

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Other Relevant Information

Sometimes, as in my case, the interviewer would not ask coding questions; rather, they would test you on your projects and whether you have a good understanding of how a language works. So be ready to tackle any type of questions which are being fired at you. Be confident during the interviews.

Sector: IT

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Name: *Sayed Owais Ali (2018B5A70947P)*
Company: Cisco
Profile: SDE

Recruitment Procedure

- Online Test - The test was of 1 hour, with 15 MCQs and 2 coding questions. MCQs included questions on aptitude, programming and networking. The coding questions were medium to hard.
- Interviews - There were four rounds.
- The first round was technical, it lasted for about an hour. One question was based on a puzzle to evaluate problem solving skills and questions related to coding were asked, mostly BST and graphs,
- The second round was based on a resume. I was told to select a project from my resume and explain it in detail including all the technical details.
- The third round was the executive round. The interviewer asked some questions about data structures, then he asked questions on C language, data allocation and pointers. Then the interviewer moved on to asking some HR questions to evaluate my personality.
- The last round was the HR round. This was a short round where we had to share our experience and some HR questions were asked. Then he asked for my preference of location and we discussed the internship.

Sources of Preparation

- Complete data structure and algorithms, and practice competitive coding from any CP website like leetcode, interview bit etc.
- Read the articles on memory allocation, pointers, puzzles, maths in programming etc. on GFG.

Sector: IT

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Name: *Swati Gupta (2018B4A80835P)*
Company: Cisco
Profile: Network/Embedded/Application Developer Intern

Recruitment Procedure

- Online Test
- Test had 17 questions in 60 mins:
    - MCQs were about Networking, Aptitude, Computer Science.
    - There were 2 coding questions. They were both of medium level, one was about bit manipulation and the other was a queue and stack related question.
- Then, we had 4 interview rounds.
    - Round 1 : This was a technical interview. Introduction, basic graph questions, sorting algorithms and 2 basic coding questions were asked. The coding questions were related to Arrays.
    - Round 2 : This was a managerial interview. It was an in-depth discussion about my resume. I was also asked basic questions about Networking and OS.
    - Round 3 : This was again a technical interview. In this round I was asked about implementing graphs and trees using different DS and comparing the efficiency of all. Later, I was asked to implement the follower-following system in Twitter. Then I was asked 2 coding questions. The coding questions were related to Linked Lists and Bit Manipulation.
    - Round 4 : This was an HR round, basic introduction and resume based questions, and was asked to tell the preferences for locations where I would like to work, etc.

Sources of Preparation

I prepared for coding from Leetcode. Also I read archives on GFG, I went through basic Networking related questions, commonly asked Cisco interview questions, etc from it.

Courses and Certification

No course or certification was required as such. Though a networking related course might be helpful (I didn't have one though).

Other Relevant Information

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- The online test was taken on HackerRank. For the interview, a Webex space was created and meeting links were sent on that before our interviews by recruiters and HR. The interviewers were really sweet and made me feel at ease.
- Make sure you know your resume well and keep on attempting the questions. More than solving the question completely, they care about your approach and a can-do attitude.
- Prepare for general questions like “Tell me why we should hire you in under 3 minutes”, “Where do you see yourself in 5 years?”, “Why Cisco?”, etc.

Sector: IT

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Name: *Srijeet Guha (2019A3PS0280P)*
Company: Cisco Systems
Profile: Embedded Systems / Networks / Application Development

Recruitment Procedure

- Recruitment consisted of 3 parts : Online Coding Test, Resume Shortlisting, Interviews
- Online Coding Test :
    - Test Environment : Hackerrank
    - Duration : 60 minutes
    - Test consisted of 17 questions : 15 Multiple Choice Questions and 2 Coding Questions
    - 15 MCQ Questions included : 5 Aptitude Questions, 5 Networking Questions, 2 Operating Systems questions and 3 General C output questions.
    - 2 Coding Questions were of Medium level. In one of the questions, CPP was not allowed and only JAVA 8, C and Python were allowed, however the other question allowed all languages.
    - Coding Questions were from topics of strings and stacks.
- Interviews :
    - Interview consisted of 4 rounds.
    - Interview Environment : WebEx Platform
    - Round 1: (Technical)
        - Duration : 45 mins
        - Started with introductions and little discussion about courses taken and projects mentioned in the resume.
        - Topics of Questions : 3 Coding Questions mostly from Linked Lists and Strings of easy - medium level. Also asked Object Oriented Programming Questions.
        - Better to study a bit about Operating Systems and Networking as not many people would be aware of these topics so it gives you a competitive edge.
    - Round 2 : (Resume Discussion)
        - Duration : 45 mins
        - Started with discussion of Practice School 1 project. Make sure to connect your PS1 project with the work that Cisco does.
        - Then discussion took place on projects mentioned in the resume. The interviewer asked detailed questions about the projects (both technical and future aspects)
        - Asked some HR questions on future plans, plans on masters, why Cisco and stuff.

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- Round 3 : (Technical and Resume Discussion)
  - Duration : 35 minutes
  - First half was a technical round and asked questions on DSA, OOP and OS.
  - Coding questions were mostly from trees (AVL, Red-Black) and strings.
  - Second half were technical questions based on the projects that I had done.
  - Questions in this half were tough and very technical.
- Round 4 : (HR)
  - Duration : 15 minutes
  - General Questions on your plan for the next 5 years, plans on masters, knowledge about Cisco, knowledge about stipend and location preferences for internship.

Sources of Preparation

[Note that the preparation strategy mentioned below is with respect to a EEE Student]

- Data Structure and Algorithms :
  - Interview Bit can be followed for the preliminary preparation of Data structure and Algorithms.
  - Leetcode / Codeforces can be used to give regular contests.
  - Geeks for Geeks for specialised data structures and algorithms like AVL, Red-Black trees etc.
- Object Oriented Programming https://whimsical.com/object-oriented-programming-cheatsheet-by-love-babbar-YbSgLatbWQ4R5paV7EgqFw: Follow this link for detailed study of Object Oriented Programming.
- Networking https://www.youtube.com/watch?v=qiQR5rTSshw Follow this link for Networking (Only if time permits)

Courses and Certification

Computer Programming, Data Structure and Algorithms, Object Oriented Programming, Operating System and Networking.

Other Relevant Information

- Ask relevant questions to the interviewer which indirectly shows your interests, knowledge

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about cisco and your passion towards the above mentioned profiles.

- https://docs.google.com/document/d/1UHnZAuTCv3GEnR8GLEtQSSBtGQeFtuHnD2dlsz4kmsA/edit?us p=sharing Have compiled the questions which i asked in various rounds of interview.

Sector: IT

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Name: *Chinmay Jitendra Shah (2019A7PS0032P)*
Company: Citrix
Profile: Software Engineer Intern

Recruitment Procedure

- The hiring followed the standard procedure. A Hackerrank Test was scheduled. Shortlisted candidates received the test link. Following that, we were called for interviews – the first one being technical while second being technical + HR.
- Online Test: This was conducted on Hackerrank platform. The test had two sections –
  - MCQs (25 Questions, based on concepts like OOP, DBMS, DSA, Networks and Mental Ability).
  - Coding Section (2 Questions, one was Medium difficulty and other was Hard).
  - I was able to solve all MCQs and 1 Coding question along with a few test cases of the second coding question.
- First Interview:
  - The first interview was scheduled a few days after the coding test. The interview was conducted on the Code Pair platform by Hackerrank (enabling live code sharing) and we were connected via video chat on the same platform.
  - The interviewer asked me to briefly introduce myself and then we promptly moved to the question that was already shared on the screen.
  - The first question was related to linked lists – "You are given a singly linked list with N nodes (N being even). Consider the whole list as the starting segment and perform the given operation till the size of the segment is positive. In each operation, reverse the whole segment in the linked list. After reversal, reduce the segment by one node on either side and continue with the next round of operation. Return the final list after performing operations."
  - Approaching this problem, I explained to the interviewer that since N is large, simply carrying out all the operations would be highly inefficient. Then I explained that only nodes at odd positions from the start in the first half of the list need to be swapped with the nodes at corresponding positions from the back of the list.
  - To achieve this, I proposed that we simply go on swapping the odd positioned nodes with the nodes at corresponding positions from the middle of the linked list and then reverse the second half of the list.
  - I coded this and the answer turned out to be wrong when the interviewer hinted that I was very close to the correct logic. So, I figured it out and explained that we needed to reverse the second half of the list before starting all swap operations and again after the swap operations were completed. This turned out to be correct and the interviewer looked very impressed.

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- After this question, he went ahead to ask me what courses were covered in college yet. He wanted to ask about Networks but didn't when I told him it hadn't been covered in college yet.
- I even suggested he could ask about OOP, but he instead directed me to another coding question – "Given an array, and a number k. Find the number of distinct pairs (a, b) from the array such that a + k = b. You may use the same array element twice."
- It was an easy question, and I solved it using unordered_set to store the elements and retrieve them to find the b for every a in the array. The interviewer was satisfied with this solution and ended the interview as the time was up.
- The interviewer was quite young and very friendly. He made small talk in the beginning of the interview to make me comfortable and was quite helpful throughout the interview, dropping hints wherever I was stuck.

- Second Interview:
  - This interview was conducted on the same Code Pair platform and was done by a senior engineer at Citrix. The interviewer began by asking me to introduce myself.
  - After I completed it, he went on to ask me about what languages I knew and was comfortable with. I listed C++, Python, JavaScript, Java and C# and he was very impressed that I knew so many languages at a young age. He then asked me what I liked to do apart from academics.
  - I mentioned that I was interested in competitive programming and then he made small talk on that subject. He asked me why I preferred C++ over other languages, and I explained it on the basis of speed and simplicity of C++. Then he asked me to head over to the coding area and show him how to reverse a linked list. I tried to explain on the go, but he said that I should code first and then explain the approach. I did the same and he looked satisfied with my approach.
  - He also asked me if I could do it recursively and I wrote a code for the same. After this followed some more small talk on heap and stack memory and function call stack.
  - After this, he asked me to explain one of my projects mentioned on my resume. I explained it in an ordered way, first explaining the background, the application and its architecture and finally its uses and advantages over other applications.
  - He was very impressed by this. After that he asked me if I had any questions for him. I asked him about the various roles that would be offered (since a pre-placement talk wasn't organized for Citrix), and the tech stack they use.
  - I had also visited their website before the interview and asked them a question very particular to something on the site. He was impressed by my interest in the company. This ended my second interview. In the evening that same day, I received the offer.

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Sources of Preparation

For coding rounds, I had prepared from the InterviewBit website and regular topic coverage from http://ww1.cpalgorithms.com/. For interviews, I had read interview experiences in GeeksForGeeks archives.

Courses and Certification

No special courses apart from the ones taught in college – DSA, OOP and DBMS.

Other Relevant Information

I found that including details while speaking in an interview helps. Always visit the company's website and pick a little detail to ask at the end of the interview. Also, prepare an intro and explanations for your internships and projects beforehand. Impromptu explanations don't always come out good.

Sector: IT

Name: *Mohammad Saif (2018B3A70750P)*
Company: Citrix
Profile: Software Engineer Intern

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Recruitment Procedure

- Hackerrank shortlisting test where around 25 students were shortlisted, finally 8 were selected. One technical interview and one technical + managerial interview.
- Hackerrank test had two sections:
    - Single correct MCQs based on computer science fundamentals like DSA, OOP, Networking, CP etc.
    - Other section was for coding, and had two questions:
        - https://leetcode.com/discuss/interview-question/1039540/onsite
        - Second question was based on a graph. We had to find the maximal number that could be formed with a circular array by certain rules defining allowed swapping.
- First interview:
    - Began with a general introduction followed by theoretical questions on CS fundamentals from various courses.
    - Some SQL queries were also asked for a given database.
    - Two coding questions were also asked, one on finding if there is a loop in a linked list and the other on making a string palindrome by performing at most one deletion.
    - Questions about projects mentioned in the resume were also asked.
- Second round:
    - Relaxed compared to the first round.
    - Started with a basic introduction and some theoretical questions on CS fundamentals. Then some situational/behavioural questions.
    - He then asked me about various sorting algorithms and their time complexities and cases of best and worst time complexities.
    - He also asked a coding question where for a given array, we had to return another array where each element is a multiplication of all the other elements except the one at that index.
    - I answered all the questions quickly so there was some time left for general discussions.
    - He asked about my hobbies and by chance he also had an interest in photography, so we ended up discussing various genres of photography that we liked.
    - The tone of the interview was very lite and we ended up discussing various other things also.

Sources of Preparation

- When beginning with competitive coding, start with Interviewbit and try to complete all the questions there. Keep searching for various techniques if you get stuck at a question.
- In the intermediate phase of preparation, start solving Leetcode questions (medium/hard) of various topics, paying special attention to DP, graphs and trees.

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- Taking part in coding contests also help a lot in learning time management, detecting corner cases, solving under stress, etc.
- Browse through the GFG puzzles sections as puzzles are also asked frequently.

Courses and Certification

DSA, OOP, OS and DBMS are asked extensively. No other MOOCs are required in my opinion.

Other Relevant Information

- On YouTube, Abdul Bari's playlist and Aditya Verma's playlist (for DP) are really good.
- Always keep searching for different algos and try to know as many as possible. GFG has an almost exhaustive list of all algorithms that one can possibly be asked about.
- Some extra data structures like Trie, DSU, Segment tree etc are sometimes asked about.
- Try to detect subtle hints given by the interviewer and when subjected with a question, some follow up questions for clarifications are always welcome.
- Don't panic if you don't know the answer immediately, start building up from a brute force approach and follow up with optimizations. All the best! 😊

Sector: IT

Name: *Pranay Paragbhai Simejiya (2019A3PS0267P)*
Company: Citrix

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Profile: Engineering - Web/Software

Recruitment Procedure

- **Coding Round:**
  - The first stage consisted of a Hackerrank online test. This round, in my opinion, was the most challenging.
  - The exam lasted 90 minutes and consisted of 25 multiple choice questions (MCQs) covering CS fundamentals, OS, DSA, and aptitude, as well as two coding questions (one medium and one severe) (in terms of Leetcode difficulty).
  - For the next round, only 25 students were chosen.
- **Interview 1:**
  - Hacker-rank was used to conduct the interview. The interviewer was quite pleasant, and he went out of his way to make me feel at ease.
  - Because we had previously obtained the name of our interviewer, I had already done some research on him (I highly recommend doing so as it would help you bond with the interviewer).
  - He began by asking me to introduce myself. He then asked me to explain any of my projects or internships, and then he asked me some questions about them.
  - He then asked me to explain the difference between functional programming and object-oriented programming using my favorite programming language.
  - Then he inquired about the distinction between the bottom-up and top-down approaches in OOP.
  - Then he asked me a few SQL and NoSQL database related questions. He then inquired about computer networks, to which I replied that I had not yet completed that course.
  - He then asked me to explain the difference between a vector and an array and later coding a vector class with an array.
  - He then asked me to code a medium-level string question, which I was able to complete.
  - This round lasted approximately 80 minutes. For the next round, 16 students were chosen.
- **Interview 2:**
  - Hacker-rank was used to conduct the interview. It was a round with both managerial and technical components. I had already done my homework on the interviewer.
  - The interviewer began by asking me a few questions regarding my project in order to assess my understanding.
  - Then he inquired about my leadership and POR experiences. Then he asked me the standard HR questions, such as how does my day go, how do I justify my CGPA,

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what are my short- and long-term goals, what sport do I participate in, and so on.
- Then he asked me a medium priority queue question, and I explained my entire strategy to him while I methodically developed the answer from the bottom up, making sure the interviewer was following along.
- I didn't have to code it because he was satisfied. He then asked if I had any questions for him, to which I responded with two that he would be delighted to answer (based on my research)
- This round lasted approximately 40 minutes. The internship was offered to eight students.

Sources of Preparation

- Interviewbit (started after my 2-2)
- Leetcode (after completing Interviewbit)
- GFG for any theory or concepts and GFG archives for company specific questions.
- Youtube.
- Strivers CP sheet and SDE sheet.

Courses and Certification

Computer Programming

Other Relevant Information

- Make sure you never stop telling the interviewer what you're thinking. They will evaluate you based on your reasoning rather than the solution's correctness or optimality.
- When the interviewer asks, "Do you have any questions for me?" prepare some questions; this is when you may really connect with the interviewer.

Sector: IT

Name: *Siddhant (2018B3A30559P)*

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Company: Citrix
Profile: Software Engineer Intern

Recruitment Procedure

- Pre-placement Talk, Online Coding test, Technical Interview, Technical Interview-Manager Round
- Test:
  - 27 questions consisting of 2 coding questions, some Aptitude questions, Networking and Operating Systems based questions, Data structures questions, basic CPP and C programming questions
  - The test was on Hackerrank platform. The test was quite balanced.
  - The coding questions' language was a bit tough to understand. Sufficient time was given to solve the questions.
- Questions asked in first Technical interview :
  - Tell us about yourself
  - Follow up questions from what you answer
  - An easy coding question based on strings
- Questions asked in Manager Round Interview :
  - Briefly explain your Resume
  - Follow up questions from what you answer
  - A priority queue based coding question was asked, the link is provided below
  - https://leetcode.com/problems/last-stone-weight/

Sources of Preparation

Try solving complex coding questions on Hackerrank, and learn basics of Networking and Operating Systems from GFG

Courses and Certification

You need to have basic knowledge of Operating Systems and Networking for clearing the Coding test. Preparing these would also be useful in interviews.

Other Relevant Information

- Try to solve as many questions as you can in the coding test.
- For the Manager round, make sure to be able to explain your whole resume to the interviewer in one go.

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- During the interview, it is a good practice to ask questions just before the end of the interview.

Sector: IT

Name: *Tanish Bansal (2019A8PS0356P)*

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Company: Citrix Systems
Profile: Software Engineer

Recruitment Procedure

- HackerRank Test, Technical Interview, Technical Interview – Managerial Round
- Online Test has 2 sections:
    - Multiple Choice Questions – This section contained a total of 25 MCQs mostly based on Computer Science Fundamentals. Questions were asked from topics like Data Structures, DBMS, Operating Systems, Networking, and Logical Aptitude. Each topic had 5 questions. It is advised to complete these in a maximum of 30 minutes.
    - Coding section – A total of 2 programming questions were asked. The first question was like this - https://leetcode.com/discuss/interview-question/1039540/onsite. The second question was of a harder nature and a DSU based approach was expected to completely pass all the test cases. I was able to solve the first question only. The coding questions should be attempted within a time span of 60 minutes.
- I am not sure about how many students had given the test, however a total of 25 students were shortlisted after the Online Coding Round.
- Technical Interview Round 1:
    - My interviewer was a senior software engineer. I introduced myself and she asked me if I was comfortable with the basics of Networking and Operating Systems and I told her that I hadn't studied the course yet.
    - She went on to ask me this question - https://www.geeksforgeeks.org/program-to-reverse-words-in-a-given-string-in-c/
    - I explained my approach and coded it within 5 minutes only. I ran a few test cases to show that my code worked correctly.
    - She asked my approach about how I'd go about implementing a real-time chat application, https://www.fullstacklabs.co/blog/chat-application-react-express-socket-io
    - She then asked me another question about how I'll tackle a large input file containing many duplicates and what would be my approach to eliminate them. This was a very open-ended question, and it was expected that the candidate asks many clarifications and suggests various approaches to handle the same.
- 16 students were shortlisted to proceed to the next round.
- Managerial Technical Interview Round 2:
    - My interviewer was a Database Analytics Manager. He first asked me some HR questions. He went on to start the second phase of the interview which were mostly advanced technical questions.

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- He asked me in-depth questions regarding each project that was listed in my CV. He then asked if I was comfortable with him asking DBMS questions.
- The questions were mostly related to types of databases (relational and non-relational), cardinality ratio, relationships between entities, E-R diagrams, etc.
- He then asked me to draw a complete and detailed flow of a software architecture for NETFLIX (NETFLIX System Design) on the whiteboard. We discussed all the functionalities that I'd like, and how I'll implement them (a comprehensive backend with everything from database connections to setting up servers across different regions on the globe).

- 8 students were selected for the internship.

Sources of Preparation

InterviewBit, Leetcode, GFG archives

Courses and Certification

DSA, DBMS and if time permits basics of Networking and OS.

Other Relevant Information

- Try to have a healthy discussion with the interviewer. Let him know all the thoughts that you have.
- Prepare for some general HR questions before you go to any interview. Also try to think of some questions that you can ask at the end of the interview. You can visit the company website for the same.
- If a question is asked about a course that you haven't done yet, you can politely tell the interviewer that you haven't done the course yet and most of them are ok with it.
- The interview process lasts for the whole day, and it is advised to get a good night's sleep before that.

Sector: IT

Name: *Tushar Khandelwal (2019A3PS0291P)*

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Company: Citrix
Profile: Software Engineer Intern

Recruitment Procedure

- Coding Test, Technical Interview, Technical Interview – Manager Round
- Coding Test –
  - 25 MCQs based on OOP, OS, DBMS, Networking and DSA
  - 2 Coding Question (1 easy, 1 hard (DSU))
- Technical Interview – 1 hour
  - Tell me about yourself.
  - Discussion on my Projects for 15 minutes.
  - 1 medium DP question (I was given total 15 minutes to write code and pass all test cases)
  - Again, discussion on my Projects and Skills.
- Technical Interview – Manager Round
  - Tell me about yourself.
  - 2 Medium Coding Questions based on Priority Queue and Sorting.
  - Discussion on my Projects and Skills
  - Then, I was asked about my hobbies and if I had plans of higher studies

Sources of Preparation

- GeeksforGeeks – For DSA, Puzzles and CS fundamentals
- InterviewBit – For interview preparation, OOP and DBMS
- Codeforces, Codechef – For regular coding practice.

Other Relevant Information

DSA is very important. Both of my interviewers were really impressed when I was able to Solve all Coding questions in time. Also, they asked a lot of questions on my projects and skills so be prepared.

Sector: Information Technology

Name: *Aakash Gupta (2018B4A70887P)*

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Company: DE Shaw
Profile: Software Developer Intern

Recruitment Procedure

- **Online Coding Test**
  - The test was moderate, and there were three questions.
  - The first one was simple array iteration if the question was understood correctly.
  - The second one was on the Kadane algorithm and can be done simply in 3
  - passes on the array.
  - The third one was about the KMP algorithm, but I could not complete it in time
  - due to some problem with the code.
- After shortlisting, there were two interview rounds, one after another, on the same day.
- **Interview Round 1:**
  - Tell us about yourself. After the introduction, they asked some questions about my work in my previous internship.
  - They asked three coding questions.
  - **First question**: Given q queries, where each query consists of two numbers, a and b. I have to insert all the numbers from a to b. After all the queries, I have to report which number appeared the most number of times. I explained the basic brute force approach first and then the efficient approach to do this.
  - **Second question**: This was about designing a data structure. I had to implement three operations as efficiently as possible: Insert(x), Delete(x), generate a random number from the numbers inserted in the data structure. I explained a few approaches that were not constant time, but after 15-20 minutes, after explaining various approaches, I was able to come up with constant amount time operations.
  - **The third question** was about finding cut-edges in a graph. I had no idea how to do that, so I first explained my brute force approach. Then for speed up, I came up with a solution that can do it in V*E time by cycle detection. The approach was not the most efficient one but was more efficient than the brute force approach.
- **Interview round 2**
  - The first few questions were about OOP in C++ because I mentioned I am comfortable in C++ for OOP. Questions were about inheritance – private inheritance and order of construction in the inheritance chain.
  - Next question: difference in #define and const. I explained everything that I knew about them, for instance, the difference in them for multiple files case, compiler warning for redefinition, etc.
  - The last question was on graph theory, where I had to convert between given units and tell which one of BFS/DFS should give the precise result. I could not identify any difference in the output of both approaches, but after one hint, I chose BFS

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and explained why it would give the precise result. Then I had to code this. I asked clarification questions in between coding, and after 10 minutes, I coded the solution, and they were satisfied.

Sources of Preparation

- For coding rounds, starting from June, I practiced questions from Leetcode about DP, Binary Tree, Graph Theory, stacks, Backtracking etc.
- For OOP in C++, I revised my concepts from learncpp.com one day before my interview.

Courses and Certifications

For my case, these were not required. I only used those concepts which I learnt on the internet.

Other Relevant Information

- One thing I would suggest is to make a resume and then have it checked by seniors. I had to make many changes in my resume after getting feedback from my seniors and my resume should not be taken lightly.
- Also, have one or two mock interviews before going into actual interviews. If you get a chance to have mock interviews from someone (PU or ACM), then apply for it. Giving mock interviews only to friends may not be a good choice because they know about you, and they may not be able to point out mistakes/omissions which you made in mock interviews.
- Attend PPT for the company. They asked me why I wanted to join this company, so I mentioned what I liked the most about the company during PPT. This also removes the need to search about the company before going into an interview.

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Sector: IT

Name: *Hardik Katehara (2019A7PS0089P)*
Company: DE Shaw
Profile: Software Developer Intern

Recruitment Procedure

- Coding Test, Resume Shortlisting, Technical Interview- 2
- Coding Test - 3 questions, 1 easy and 2 medium-hard level questions
- Technical Interview - 1:
    - Tell me about yourself.
    - How are stacks and queues used while implementing text editors (ex: stack for undo).
    - OOP questions.
    - 2 questions of DP (1 easy, 1 hard).
- Technical Interview - 2:
    - Tell me about yourself.
    - I had mentioned Git in my resume, so discussion about how to use Git and how we can make our own git (15 minutes).
    - Design Splitwise.
    - DBMS questions.

Sources of Preparation

Leetcode and InterviewBit for interview preparation. OOP and DBMS - College Course and InterviewBit

Courses and Certification

College Courses - OOP and DBMS.

Other Relevant Information

These interviews require strong CS fundamentals.

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Sector: IT

Name: *Pratham Neeraj Gupta (2019A7PS0051P)*
Company: DE Shaw
Profile: Software Development Intern

Recruitment Procedure

- Online Test:
  - Test had 3 DSA Questions: Each had its own time limit, 1 was easy and 2 were medium to hard. I solved the easy one completely and the other 2 partially.
  - It is important to maintain speed to finish all questions. Going back to previous questions is not allowed.
- Technical Interview 1:
  - No introduction, directly began with an implementation problem - N people (1...N) in a line, given a list a list of K integers -> the number of times the parcel is passed around in each round, print the person who is eliminated for each round.
  - I was able to explain and implement the correct approach but it had some bugs and wasted around 15 mins debugging it after which they just moved on.
  - A lot of problems on OOPs - had to explain the 4 principles (encapsulation, polymorphism etc). Difference between abstract class and Interface. Difference between struct and class in CPP
  - Another DSA problem - In a party of N people, person A knows person B (A knows B does not imply that B knows A) can be checked by a function Knows(A, B). A celebrity is a person that everybody knows but he does not know anybody. Check if there is a celebrity at the party.
    - I gave them brute force O(N^2). Then I argued for a while that it is not possible to do better as the graph is directed and we will have to check all pairs.
    - An optimized solution I gave was to have a set of potential celebs then while iterating over the guests in the party remove people from the set according to the given condition. (It was hard to predict the time complexity of this approach)
- Technical Interview 2:
  - Again started directly with an algorithmic question. Given a function f() that returns 0 or 1 with 0.5/0.5 probability, design a function g() that utilizes f() to return 0 or 1 with 0.1/0.9 probability. I was able to explain the logic but wasn't able to write the correct implementation.
  - Followed by a lot of OOP. Had to describe Polymorphism, then was asked which

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design pattern could be used to solve the Diamond problem in Java.
    - Design problem 1- Describe how OOPs can be used to make a system that allows choice of payment mode like Paytm/Amazon Pay/etc. (this is a textbook example of the Strategy pattern)
    - Design problem 2- Design a data structure which supports Insertion, Deletion, Access, getRandom() all in amortized O(1) time. (you can find this problem on GFG)
    - Lastly, I was grilled on DBMS. I was given a table of employees and managers and was asked to write a query to find the name of the manager's manager (skip level manager) for each employee.
    - Then I was told to model how I will store a parent child relationship (given like a tree), write queries to get all the children or find the parent.
    - I was asked to decide what would be my primary and secondary index. I argued that we could create a secondary index that points to the first child given a parent. He was convinced only after I wrote an example of how I wanted to structure the data and labeled the primary and secondary indices.
    - Final question was the space complexity of these indices and how they handled insertions/updates.
- There was no HR Round.

Sources of Preparation

- Basics of DSA on Hackerrank to get comfortable with STL, completed most problems on Interviewbit (~45 days), then moved to Leetcode (~50 days). Preferred to select questions using Virtual Contests (to time myself).
- No codeforces or codechef.
- Jobsy classes also helped with DSA concepts.
- 2 Mock interviews with seniors.

Courses and Certification

Just the CS CDCs, concepts in OOP and DBMS must be very strong.

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Other Relevant Information

It is fine if you don't implement something fully and completely in the interview, they just want to see if you can come up with the correct solution approach and will give more than enough time to think. So don’t try to skip over a question if you can’t find the correct answer, just keep telling them different ways to do it.

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Sector: IT

Name: *Sarthak Choudhary (2019A7PS0112P)*
Company: DE Shaw India
Profile: Software Developer Intern

Recruitment Procedure

- Online Test, Resume Shortlisting, Technical Interview, HR
- The Online Test had three sections each containing a question based on Data Structure and Algorithms. Each Section was individually timed for 25, 35 and 35 minutes respectively. The difficulty of each section can be marked as easy, medium and medium as per leetcode standards.
- The Technical Interview in itself was divided into two rounds (60 mins each) and each round was divided into two sections further conducted by two interviewers.
    - In the first round, firstly I was asked to implement a LRU cache in cpp (language chosen by me).
    - I tried to explain the logic with examples and a dry run but failed to implement it completely.
    - Next, I was asked about the internals of cpp, like classes, const pointers, polymorphism and so.
    - Next round was scheduled around half an hour after the first round, this round was based more on DSA, DBMS and OOP.
    - I was asked to traverse a binary tree in spiral fashion (left to right then right to left alternatively). I explained my approach with examples using two stacks. They seemed pretty satisfied but asked me to use a single data structure. For that I came up with a solution using deque.
    - Next, I was asked about a few points from my resume. They asked me the reasons for the choices that I made in my projects. There were questions from technologies I was familiar with.
    - Again I was asked a few one liners about OOP, then the discussion shifted towards DBMS. The questions regarding DBMS were about the explanation of ACID properties, how durability is implemented in a database.
    - At last I was asked just to explain the approach for another DSA problem regarding course scheduling. I explained that using directed acyclic graphs and toposort.
    - Finally at the end of each round, they asked if I had any questions for them.
- There was no HR round in my case. For the rest of the rounds try to explain your answer

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as much as you can using examples and test cases.

Sources of Preparation

- Leetcode and Interviewbit - for DSA problems.
- Stackify - for OOP concepts revision
- Course Lab Sheets and geeksforgeeks - for DBMS and SQL

Courses and Certification

No courses as such, questions were asked from the Computer Science CDCs only.

Other Relevant Information

Again, try to make your answers as explanatory as possible. Start from explaining the approach, then could probably give the proof for why your approach is correct, finally you can start implementing it. Always carry the interviewer with you, even if you have not arrived at a solution yet.

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Sector: IT

Name: *Nandan Bharatkumar Parikh (2019A7PS0097P)*
Company: Flipkart
Profile: Engineering - Web / Software

Recruitment Procedure

- **Coding Round:**
  - The first phase was the online test.
  - There were three coding questions for which 90 minutes were allotted. This was one of the most challenging coding rounds during the intern season, including Day 0 companies.
  - One easy and two hard questions were there (in terms of LeetCode difficulty).
  - Many people also faced problems with the test platform (AMCAT) since they were using C++11 and a relatively old compiler. I don't remember the number of students shortlisted, but there weren't many.
- **Interview 1:**
  - The interviewer was super chill, and tried to make me feel as comfortable as possible. Got started immediately without any introduction.
  - He asked me two very standard questions. The first one was a common string DP problem (Number of ways to decode). The second one was Rainwater Trapping, another frequent question.
  - I started from brute force and arrived at the optimal solution (at least according to time complexity) for both.
  - In the first question, he asked me if I could reduce space complexity even more (getting rid of the DP array), and we discussed it. I arrived at a rough approach, and he didn't ask me to code that one.
- **Interview 2:**
  - Again, the interview was very friendly and chill. Asked me for my introduction and some games I had made.
  - The first question was again a standard DP question (House Robber). The second question was Target Subarray sum.
  - Again, I was able to arrive at optimal solutions for both. Since time remained, she also asked me Target Subset sum to which I gave the optimal solution.

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Sources of Preparation

InterviewBit (started after my 2-2), LeetCode (after I was done with InterviewBit), company-specific GFG archives

Courses and Certification

DSA, DBMS, OOP, all CDCs

Other Relevant Information

- Make sure you never stop talking about what you are thinking to the interviewer. They judge you more for your thinking than the correctness or optimality of the solution.
- Prepare some questions for when the interviewer asks, “Do you have any questions for me?”, you can really vibe with the interviewer here.

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Sector: IT

Name: *Punit Lohia (2018B3A70766P)*
Company: Flipkart
Profile: Software Development Intern

Recruitment Procedure

- The hiring workflow consisted of 3 rounds in total (1 Coding Round, 2 Technical Interviews).
- **Round 1** - Online Test: This round was conducted on the Aspiring Minds AMCAT platform. We were given three questions to solve within 90 mins.
    - Given a string A consisting of lowercase alphabets and a list of Strings B, find the number of strings in B that forms a substring after deleting at most k characters from A; also, these operations are allowed on strings in B
        - We can change character 'o' to 'a', 't' to 'i', and vice-versa.
        - We can delete one character from the current string.
    - Count ways to represent a number as a sum of perfect squares
    - A state consists of n cities. All roads in the city are bidirectional. We have to find the length of the shortest route between two given cities, with a twist that you can eliminate the distance between any "k" connected cities (eliminate a distance means you can make the distance between two connected cities as 0, you can do this "k" times).
- **Round 2** - Technical Interview -1**:** This round was held on the Aspiring Minds Codemeet platform, a Live Coding Interview Platform. The Interviewer asked to write only Pseudo Code for the following questions:
    - Check whether an Array is Subarray of another Array
    - Given a Binary Tree having positive and negative nodes, the task is to find the maximum sum level in it.
    - Multiple follow up questions were asked on both questions.
- **Round 3 –** Technical Interview – 2: This round was also held on the Aspiring Minds Codemeet platform. In this round also, the Interviewer asked to write only Pseudo Code for the following questions:
    - Given an unsorted array of nonnegative integers, find a continuous subarray that adds to a given number. And then, I was asked what would I do when an array can contain negative numbers also.
    - Given an array Arr of size N containing positive integers. Find the maximum sum of a subsequence such that no two numbers in the sequence should be adjacent in the array.

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- Same as Round 1, Multiple follow up questions were asked on both questions

Sources of Preparation

GeeksforGeeks DSA course, LeetCode, InterviewBit and HackerRank

Courses and Certification

Data Structure and Algorithms, Object-Oriented Programming

Other Relevant Information

- Start practicing DSA problems as soon as possible
- Before thinking about the solution, ask as many questions as you can ask the Interviewer regarding the question.
- After this, first of all, explain your approach to the Interviewer. So that Interviewer can help you if you are going in the wrong direction.
- Think out loud during the interviews. While writing the code, try to explain every line of your code at the same time to the Interviewer.
- Be very sure of the Time and Space Complexity of every algorithm that you mention to the Interviewer.
- CGPA matters even if everybody tells it doesn't. Try to maintain a decent CGPA.

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Sector: IT

Name: *Avisha Gupta (2018B3A70105P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- Online Test, Technical Interview, HR Interview
- CGPA cutoff: 7
- **Online Test:** The test had 5 sections to be completed in 135 mins:
  - Section 1: 2 Coding Questions (30 mins)
  - Section 2: 20 CS Fundamentals MCQs (20 mins) – mainly from OOP, DSA, DBMS
  - Section 3: 20 MCQs based on aptitude (25 mins) – majority were based on Prob & Stats 4. Section 4: 1 Advanced Programming Question (45 mins)
  - Section 5: 2 Subjective HR Questions (15 mins)
- **Technical Interview** (Zoom Call + HackerRank)
  - The preparation for this round is similar to other companies. You should have a good hold over concepts of DSA and OOP. Basic knowledge of DBMS is helpful.
  - Goldman Sachs and many other companies do repeat a lot of questions during campus interviews, so you can go through company-wise interview questions on InterviewBit or LeetCode. Consulting the interview experience testimonials on GFG or any other website is very helpful.
  - Most importantly, be thorough with the projects and courses mentioned by you on your resume.
- Round-1 (45 mins):
  - Resume and project discussion: They go deep into project if you have mentioned ML (was asked about the architecture and training procedure of the ML project I was working on)
  - 2 puzzles –
    - A game with 2 players and 21 cards. Each player has alternate moves, where in each move, the player can take away either 1, 2 or 3 cards. Player picking up the last card wins, and each player plays optimally. Will you take the first move?
    - Find fastest 3 horses (https://www.geeksforgeeks.org/puzzle-9-find-the-fastest-3-horses/)
  - 1 coding problem to find minimum in rotated sorted array (https://www.geeksforgeeks.org/find-minimum-element-in-a-sorted-and-rotated-arr

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ay/)
    - A question on probability where we needed to find the probability that roots of a given equation are real. The condition was transformed into a standard parabola equation and can be solved further using that.
- Round-2 (45 mins):
    - 1 question based on probability: Find expected number of coin tosses before 3 heads and then solve to obtain a generalized formula for k heads
    - 1 coding question - Reverse Pairs (https://leetcode.com/problems/reverse-pairs/)
    - Since I listed Derivatives of Risk and Management as a subject in my resume, was asked about Greeks and call option (describe the shape of pay-off curve for call option)
- Round-3 (30 mins): 2 puzzles
    - Resume and project discussion
    - https://www.geeksforgeeks.org/puzzle-will-sheep-safe/
    - https://www.geeksforgeeks.org/puzzle-18-torch-and-bridge/
- **HR Interview** (30 mins)
    - Resume and project discussion
    - 1 coding question - https://www.geeksforgeeks.org/find-pair-given-sum-bst/
    - Some DSA based questions on time complexity of sorting algorithms and working to come up with a better time complexity of Quick or Merge sort (O(n log(n)) - similar to Bucket Sort (O(log n))
    - Few HR questions like - If you are working on some project and you are about to finish it on time but suddenly your partner is not able to continue further than in this case what will you do.

Sources of Preparation

LeetCode, GeeksForGeeks, InterviewBit

Courses and Certification

OOP, DSA, DBMS

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Other Relevant Information

- Goldman Sachs is famous for asking puzzles, so make sure you solve some before your interviews. A useful source can be GFG (https://www.geeksforgeeks.org/puzzles/#Puzzles)
- Brush up basic concepts of Prob & Stats for GS (like Bayes theorem, normal distribution, expectation)
- During interviews, keep communicating with your interviewer as their main objective is to check your problem-solving skills and not your coding skills. Even if you are stuck, explain it to the interviewer. They will give you hints at every step to guide you to the final solution.
- Asking interviewers some well thought questions at the end of interview rounds helps them gauge your interest in the company. So be attentive in company orientations and read about the company. For GS, you can visit its Engineering blog.
- GS conducts a variable number of interview rounds based on your profile and performance. I had 4 interviews while some just had 2. So, don't get disheartened if you are not being called for further rounds and don't be too happy if you are going for the last round.

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Sector: IT

Name: *Gautam Bhambhani (2019A7PS0101P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- **Procedure –** Online Round, Technical Interview, HR round.
- **CGPA Cutoff –** 7
- **Online Coding Test (135 min):**
  - **Section 1 (30 min):**
    - 2 coding questions.
    - Easy to medium difficulty.
    - The 1st one was greedy 2 pointer and the second was adhoc - easy.
    - Tip – Practicing easy/medium problems on Leetcode/InterviewBit shall suffice.
  - **Section 2 (25 min):**
    - Aptitude test, MCQ questions.
    - Marking was tough (+5,-2)
    - Difficulty – Easy to Medium.
    - No of MCQs – 8
    - Topics – Probability, PnC, Puzzles etc.
    - Tip – Solve the GFG puzzle section.
  - **Section 3 (15 min):**
    - Situation / past experience based questions.
    - No. of Questions - 2
    - Word Limit – 200.
    - Tip – See GFG archives, most of the time the questions are the same.
  - **Section 4 (45 min):**
    - 1 Advanced Programming Question.
    - Tip – Most of the time this question is open ended and quite hard and cannot be solved with the DSA knowledge most people have. It is recommended to try to solve it partially by applying brute force and try to pass as many test cases as possible.
  - **Section 5 (20 min):**
    - MCQs on CS Fundamentals (DSA, OOP, DBMS, CN etc.)
    - No of questions – 7.
    - Marking was tough (+5,-2)

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    - Difficulty – Easy to Medium.
    - Tip – If you are a CS student then the course material for these subjects is more than enough, if you are not, try articles and blogs/notes on InterviewBit/GFG.
- **Technical Interview:** For technical Interviews they gave us a HackerRank Code-pair link (Google docs but for coding) and we had to join a zoom meeting where the specific interviewer will call you to a separate breakout room and ask you to turn on your camera and code on code-pair.
- **Round 1 (30 – 40 min):**
    - 5 min introduction and questions on interests and field of study.
    - 1 simple question to find the 2nd minimum element of the array in a single pass.
    - 1 question on finding the shortest length subarray with sum greater than or equal to a target integer. The array only contained positive integers so the question can be solved in O(nlogn) time and O(1) extra space with modifications in the given array. She was satisfied with my binary search approach.
    - 1 easy puzzle on derangement.
    - Then she asked me if I had any questions. I asked her about her role in the company and the WLB at Goldman Sachs.
- **Round 2 (30 – 40 min)**
    - 5 min introduction and questions on interests and field of study.
    - Then he jumped to a question on BST, basically the question was to print the cyclic order traversal of the BST, i.e the left side view followed by bottom view and then reversed right side view. Solved it using simple DFS and BFS traversals with O(N) time and O(h) space.
    - Then he asked me to solve it in O(h) time since it is a BST, I told him that it was not possible to solve it in O(h) time and even gave the proof to why it would fail and gave a sample case to the same. He was satisfied with the answer.
    - Then he asked me whether I have worked with MongoDB on any project, I told him that most of my projects involved frontend dev and I have only worked with firebase database in a project and SQL in my DBS course. He was fine with it and didn't ask any further questions.
    - Then he asked me if I had any questions. I asked him about the role of Summer Analyst and how they will decide which specific project and team I will be working with.
- **Round 3 (40 – 50 min):**
    - 5 min introduction and questions on interests and field of study. He asked me about my PS-1 project and the tech stack that I used in that.
    - Then he moved to the DSA question, you have a string and we have to determine whether we can remove exactly k characters to make it a palindrome.

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- I started with a brute force approach and moved to a O(n^2*k) DP approach, then he asked me what if instead of exactly k we had at most k.
- Then I translated this problem into a modified Edit Distance problem of a given string and its reversed string and gave an O(n^2) solution, he was satisfied with the solution.
- Then he asked me the spiral order traversal of a matrix problem. I smiled a bit, then he asked whether I have solved this problem before. I said yes I have solved this problem a couple of times and gave a brief 20 sec detail to my approach. He was satisfied and we moved on to the next question.
- Then the 3rd question , I was given a sorted array and I had to find index i and j such that i != j and abs(target – arr[i] – arr[j]) is as small as possible. I solved it using 2 pointers then he asked a few easy follow up questions on the same.
- Lastly he asked if I had any questions, I asked him about a few open source projects GS was working on which followed a 10 min discussion and briefing on the same.

Sources of Preparation

- InterviewBit
- GeeksforGeeks
- Leetcode
- GFG Puzzles
- DSA/OOP/DBS from college notes/slides and online articles from GFG and IB.

Courses and Certification

- Important Subjects – DSA >> Probability and Puzzles > OOP > DBS.
- Practice a few behavioral/ HR questions.

Other Relevant Information

- There are a variable number of interviews (2 to 4) for every person depending on the performance. In no way is the number of rounds proportional to selection probability. There were people who were rejected after 4 rounds and few were selected after the 2nd round only.
- There are majorly 2 types of interview in my opinion, one is totally DSA oriented and others have hard probability and puzzle questions.
- Please prepare all the topics beforehand as interviews are mostly within 1 or 2 days at max

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after coding round results so you won't get time to prepare.

- Take a good night sleep before the interviews , I didn't sleep before the interviews as I didn't brush up my CS fundamentals and had interviews for 2 major Day 0 companies the next day, trust me I will never recommend this as the interview day is very dynamic and you have to sit on your PC for 7-8 hours continuously because you never know the instant they will call you for the next round of interview. Please prepare all the things well before time and take a good night sleep of at least 8-10 hours.
- All the best to everyone reading this for their interviews and if you haven't been shortlisted yet, don't worry there are plenty of awesome companies that visit our campus, study hard and ace them!

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Sector: IT

Name: *Harsh Agarwal (2019A7PS0049P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- Coding Round - Consisted of easy/medium level coding questions, 1 tough coding question, some MCQs on math and CS fundamentals. Important thing to note is the timer is separate for every section and we can switch sections in between, So it is advisable to save time on tough questions and use it to think of solutions to coding questions or other relatively easy questions.
- Technical Interview Round 1 - Consisted of a simple dsa question for me. very similar to this question - https://www.interviewbit.com/problems/hotel-bookings-possible/
- Technical Interview Round 2 - Consisted of three DSA questions. First was to find kth largest element of the array in less than O(nlog(n)) time. Second was a queens problem and third was a question on stack, which I believed was asked just because we had some time left.
- Technical Interview Round 3 - Had brief discussion on projects followed by a lot of standard OOPs questions. Then I was asked a 3 bulbs puzzle from geeks for geeks. Finally I was asked some backend specific questions as most of my projects are of backend development.

Sources of Preparation

- For DSA Questions - Interviewbit and Geeks for Geeks are more than enough.
- For Puzzles - https://www.geeksforgeeks.org/puzzles/

Other Relevant Information

Some students were also asked questions from Probability, PnC and Statistics. Most of the interview puzzles were from the Geeksforgeeks puzzles section mentioned earlier.

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Sector: IT

Name: *Krupa Bhayani (2018B4A70844P)*
Company: Goldman Sachs
Profile: Summer analyst

Recruitment Procedure

- Online test
  - The test had 20 questions divided over five sections. Total duration of the test was around 2 hours and each section had its own time limit. Although switching between the sections was allowed. For example, you are in section A and switch to section B then the timer for section A stops and the timer for section B starts.
  - First section had 2 easy coding questions for around 30 mins. Second, I had one hard coding question for 45 mins. Third section had 2 essay type questions for 15 mins. Rest two sections were MCQ based, one was based on Mathematics and other one was Computer basics. There were negative marks for wrong answers in MCQ (+5 and -2).
- Interviews
  - There were 2-5 rounds of interviews. However, I got only 2 interviews, both technical. We were asked to use hackerrank for coding our solutions and also be on a zoom meeting for video call.
  - My first interviewer started off with a quick introduction and asked me to do the same. Then he quickly asked me to solve a question. I gave him my approach and we discussed this for 10 minutes. He did not ask me to code and moved to the next question. It was a medium level Leetcode question and I explained to him my approach. He asked me to code and try it for a few test cases. At the end he asked me if I had any questions for him.
  - Second interviewer asked me to give a resume walkthrough and explain one of the projects in detail. After this he asked me a leetcode medium level linked list question and we spent a lot of time solving it. I started with a naïve brute force method and he asked me to code every method until it was the optimal one. Then he asked me a theoretical question and we had a long discussion over it and at the end, he asked me if I had any questions for him.

Sources of Preparation

Interview Bit, Leetcode

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Sector: IT

Name: *Kushank Maheshwari (2018B4A70679P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- **Round 1** Online Test - Time: 135 minutes
  - **Total 5 sections:**
    - Section 1: 2 Coding questions (30 min)
    - Section 2: Quant MCQs (20 min)
    - Section 3: Computer Science MCQs (25 min)
    - Section 4: 1 Advance programming question (45 min)
    - Section 5: 2 Subjective questions (15 min)
  - Around 53 students were selected after this round.
- **Round 2:** Technical Interview 1 - Time: 30 minutes
  - The interviewer started by asking for my introduction and then discussed the projects in my resume. It was then followed by 2 probability questions:
    - 2 boxes, one having 12 Red and 12 Black balls and the other having 24 Red and 24 Black balls. Which box has greater probability of getting balls of the same color?
    - Find the expected number of moves required to win a lottery. A lottery is won when n different tickets are received.
- **Round 3:** Technical Interview 2 – Time: 55 minutes
  - The interviewer started with my introduction and then discussed the projects in my resume. It was then followed by 3 probability questions (All the three were similar, just a slight modification was made in each of them).
  - https://math.stackexchange.com/questions/1839496/expected-number-of tosses-to-get-3-consecutive-heads
  - Firstly, the above question was asked. Then, the interviewer asked about the expected number of moves wherein the 3 heads need not be consecutive. Finally, a variant of this question was asked.
  - It was then followed by a DSA round wherein I got this question: https://www.geeksforgeeks.org/counting-inversions/.
  - Lastly, one puzzle was given to solve: https://www.geeksforgeeks.org/puzzle-20-5-pirates-and-100-gold-coins/
  - The puzzle was similar to this puzzle but instead of 5 pirates the puzzle was extended to 100 pirates and the maximum share needed to be found.

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- Then he asked if I had any questions. Please attend the ppt of the company, you can really come across questions that can impress interviewers.

Sources of Preparation

- For Puzzles: https://www.geeksforgeeks.org/puzzles/
- For Aptitude questions in 1st round: https://www.indiabix.com/
- For practicing DSA, solve questions on Leetcode, Interviewbit and try to give timed tests or contests on Leetcode and Codeforces.

Courses and Certification

No subject as such. Interns were asked questions from DSA and Probability and Statistics. Preparing these subjects could prove useful.

Other Relevant Information

- During the interviews listen to the hints of the interviewer very carefully. Even if you don't know the answer, try to iterate upon the hints given by the interviewer and present it to him in some logical manner.
- Above all, try to tell the interviewer what you are thinking about approaching the problem rather than just telling him the final answer.
- Whenever any coding question is given to solve, try to ask as many questions as possible. For example, what are the constraints of the variable's values in the question? Even if you don't have any questions just repeat the question to tell the interviewer that you understood the question well.
- Finally, stay confident and don't let your anxiety affect your interview.

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Sector: IT

Name: *Nidheesh Jain (2019A7PS0024P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- Online test: Platform: HackerRank. It consisted of 5 sections:
  - **Basic CP** (2 questions, 30 mins) [Level: Easy]
  - **Mathematics MCQ** (Algebra, Probability, Geometry, PnC) (8 questions, 25 minutes) [Level: Difficult]
  - **CS MCQ** (DSA, Networking, OS, OOP) (7 Questions, 20 minutes) [Level: Moderate]
  - **Behavioral Questions** (1 situation and 1 experience-based question, 200 words write-up on each, 15 minutes). These questions are always the same. You can prepare the answers in advance too.
  - **Advanced Coding Section** (1 question, 45 minutes) [Level: Hard]
- **Tips and tricks for test:**
  - Maintain good speed right from beginning to end. Whatever time you save will be used up later on.
  - You can switch between sections but the separate time limit for each section still applies. Timer for one section pauses when you are on another section. So do an easy section early and spend time on that section thinking about questions leftover in difficult sections.
  - Hackerrank can reveal your program output. See if you can put them to use.
- Interview: Platform: Zoom and HackerRank Codepair
  - I had 3 interviews of 20-25 minutes duration each. All three were technical interviews. For me, all of them were focused only on Probability and puzzles.
  - Be prepared with an introduction of yourself (mention your projects, achievements, brief journey, etc.). Tell them things in such a way that makes them curious about you and they cross-question on your strong areas.
  - **Generic advice**: Brush up on topics like DSA, OOP, and DBMS before the interview.
  - GS is famous for asking puzzles in its interviews, browse a few from sources like GFG. In my case, they focused mainly on the approach to question and way of thinking rather than final answers. I didn't study any puzzles beforehand but still, most were easy enough to crack.
  - All rounds proceeded with the interviewer asking me to introduce myself while

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they looked for questions that they wanted to ask me.
- Honestly, It kind of felt like how oral exams were done in schools. You may be questioned on a few points that you mention in your introduction such as projects, club activities, or hobbies.
- Most interviewers were pretty chill and you can be chill too (without crossing the lines). You can talk openly about your even slightly relevant interests and try to know more about its culture in the company if they ask you to put up questions.
- In another instance, in Round 3 the interviewer asked me a puzzle that was already asked to me in Round 1, I said that I had already been asked that question and I knew the answer. We both shared small laughter as she asked who took my first interview.
- I was asked only **1 DSA question and 0 coding questions**.
- In the first interview round, the interviewer asked me if I do CP, to which I said that I don't enjoy doing it, but since it's a prerequisite for all the companies, I have done a bit of it.
- She then moved forward with asking me about the Data structures I knew and then asked when it's better to use BFS/DFS.
- All the rounds were of the same difficulty and in each, mostly puzzles were asked (easy-medium level). There were a few probability questions here and there that dealt with the concept of expectation.
- Having good projects on your resume always helps a lot. Honestly, I think I had zero competitive coding knowledge and still managed to get through just because of the Projects and Achievements on my Resume.
- The interviewer asks if we have any questions for them at the end of each interview. I had a genuine question if the company offered cybersecurity roles as I wanted an intern primarily in that field and I even emphasized my interest while introducing myself.
- She didn't know the answer to the question, but she said that she'll ask around. This is a potential opportunity to connect the interviewer with you a bit more.

Sources of Preparation

- I didn't have much preparation except looking up 3-4 questions from the interview archives on GFG. Be prepared for the worst-case scenario. Go through the archives.
- Most probably they won't ask some very tough CP questions in interviews.
- Brush up on discrete probability distributions and especially on expectation concepts. Also, pick up some puzzles from GFG Goldman Sachs archives, only if you have time (they are mostly easy and they are willing to walk you through it if you get stuck). I felt

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that one doesn't really need to prepare much for an interview at Goldman Sachs.

Courses and Certification

- None except Probability felt like a prerequisite. Doing DSA would be good.
- It's subjective because they need to talk about something in an interview. If you have something to show I think one can mold the interview in such a way that they don't focus on Academic courses much.
- If acads are your strong point I think you can turn them in that direction too.

Other Relevant Information

- Interviewers are really cool. Just talk to them in an easy-going, respectful, polite, and friendly manner.
- Try to steer the interviewers to your strong points as soon as you get the chance.
- Be prepared for "Tell me about yourself". The answer to this question dictates the whole interview flow. The Interviewer is as clueless as you about what they are going to ask, therefore, throw some open ends in your answers so that they cross-question on those things.
- Think that Goldman Sachs is just another common company and if not this, then there are 100 more companies that are more than willing to take you in. It really helps to be unstressed and cheerful. The interviewer also wants to see something fresh since they are taking interviews from morning to evening.

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Sector: IT

Name: *Lakshay Munjal (2019A7PS0047P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- Coding Test, Resume Shortlisting, 2 Technical Interviews
- Coding Test - 3 questions, 1 easy and 2 medium-hard level questions
- Technical Interview - 1:
    - Tell me about yourself.
    - Probability and Stats questions. (Expected number of tosses to get 3 consecutive heads. He kept modifying the question to see how I would approach the solution).
- Technical Interview - 2
    - Tell me about yourself.
    - Discussion about resume and my projects.
    - Puzzles/Quant questions.
    - Coding questions. (Using concepts of dp, max suffix array, etc)

Sources of Preparation

Leetcode and InterviewBit for interview preparation. OOP and DBMS - College Course and InterviewBit.

Courses and Certification

College Courses - OOP and DBMS

Other Relevant Information

These interviews require strong CS fundamentals.

Sector: IT

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Name: *Nishika Gupta (2018B4A70858P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- The Recruitment Procedure- Online Test, Technical Interview and HR Interview
- CGPA cutoff- 7
- Online Test- 5 sections in total (3 coding questions and 15 MCQ's)
    - **Section 1**: 2 coding questions in 30 minutes (difficulty level- easy)
    - **Section 2**: 8 MCQ's in 25 minutes based on OOP, Prob and Stats, Data Structures, etc. (difficulty level- easy)
    - **Section 3**: 7 MCQ's in 20 minutes based on OOP, Data Structures, etc. (difficulty level- easy-medium)
    - **Section 4**: 1 coding question in 45 minutes (questions are mostly based on matrices) (difficulty level- hard)
    - **Section 5**: 2 basic paragraph writing questions on life experiences and reaction to different situations. (difficulty level- lite)
- Technical Interview
    - Round 1: 1 puzzle (based on flipping bits) and 1 question on pigeonhole principles were asked. (difficulty level- medium)
    - Round 2 : 2 probability questions were asked. One was based on Bernoulli distribution and the other was based on conditional probability. (difficulty level- medium-hard)

Sources of Preparation

- Geeks for Geeks (looked at GS interview archives and puzzles)
- InterviewBit
- Leetcode
- HackerRank
- Demux Academy

Courses and Certification

- OOP, DBMS, DSA

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- Probability and Statistics

Other Relevant Information

- GS holds variable rounds (2-4) for each candidate and type of questions asked depends on the interviewer. Some were asked probability questions in all their rounds and some were asked only technical coding questions. So prepare well for both types of questions.
- For probability and puzzle-based questions: Even if you don't know the answer, say aloud all the steps you are taking and build the solution step by step. Through this the interviewer will get to know your thinking process and will guide you at each step to arrive at the final solution.

Sector: IT

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Name: *Sonali Agrawal (2018B2A30934P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- The Recruitment Procedure- Online Test, Technical Interview.
- Eligibility criteria- CGPA Cutoff: 7, All branches.
- Online Test- Time: 135 mins**.** Platform- Hackerrank. There were 5 sections in this round and every section was time-bound.
    - Section 1: 2 coding questions, Time: 30 min.
    - Section 2: 8 MCQ's, topics asked were aptitude, probability, calculation, permutation and combination. For each question +5 for correct answer and -2 for wrong answer. Time: 25 min.
    - Section 3: Advance Coding Section, 1 coding question. Time: 45 min.
    - Section 4: Subjective, 2 HR questions situation based. Time 15 min
    - Section 5: 7 MCQ's based on the data structures, OOP and OS based. For each question +5 for correct answer and -2 for wrong answer. Time: 20 min. Switching between the sections was allowed and whenever you switch to any section the timer of that section starts and the timer of the previous section gets paused. 62 students were shortlisted for further process.
- Technical Interview:
    - Round 1 (35 min):
        - Lot of resume grilling, previous internship project discussion (she went deep into it), some HR questions like why do you want to join GS.
        - Then, she gave me a coding question: https://www.geeksforgeeks.org/removing-string-that-is-an-anagram-of-an-earlier-string/
        - At the end, she asked if I had any questions for her. I asked 1-2 questions and it was over.
    - Round 2 (25 min -30 min): The interviewer was very friendly and probably a senior. He asked me about my last interview. Coding questions:
        - https://www.geeksforgeeks.org/find-if-string-is-k-palindrome-or-not/ In this he made a slight variation and asked to remove exactly k elements.
        - https://www.geeksforgeeks.org/given-sorted-array-number-x-find-pair-array whose-sum-closest-x/ After I coded this question, he made a slight variation and asked given a sorted array and a number x, find the pair in array whose difference is closest to x. He only asked me to think of the edge cases in which the approach may fail. Focus on the base conditions,

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edge cases as you code and keep explaining the approach to the interviewer and dry run the code.

Sources of Preparation

- GeeksforGeeks (Go through the archives for interview rounds)
- InterviewBit
- Youtube: DP-Aditya Verma, TechDose, Apna College

Courses and Certification

Courses to be focused on: Majorly DSA, OOP basics (for non-CS)

Other Relevant Information

- Prepare puzzles and focus on probability and statistics as well, many other candidates were asked this.
- GS holds a variable number of rounds for each candidate, some had only 2 while others had 3-4.
- To conclude, I would say it's luck + hard work both that matters at the end. Good Luck :)

Sector: IT

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Name: *Yash Gupta (2019A7PS1138P)*
Company: Goldman Sachs
Profile: Summer Analyst

Recruitment Procedure

- The recruitment process comprised an online coding/MCQ test and a set of technical interviews.
- The online test was a 135-minute long test with 5 sections: 2 easy-medium coding questions, 8 questions on mathematics/aptitude, 1 hard coding question, 7 questions on computer science subjects/programming languages, and 2 HR-type questions. Each section was timed separately.
- The number of interviews varied among candidates. I had 2 technical interviews. Some had 4 rounds.
- The first interview consisted of 4 questions: 1 conditional probability problem, 1 question on differential calculus and monotonicity, 1 coding question involving divide and conquer, and 1 puzzle.
- The second interview had 2 questions on probability: one on negative binomial distribution and the other involving state diagrams. The interviewer was very interested in discussing my projects and past internships with me. We also discussed his work and the data science involved in it at length.

Sources of Preparation

For the interview season, I had mostly focussed on my DSA preparation. I used the following resources for the same:

- InterviewBit for a quick coverage of all types of questions asked
- LeetCode for more thorough practice
- Other than that I used youtube videos and course notes to prepare topics related to my projects and internships mentioned in my resume. I also solved some GFG puzzles the day before the interview.

Courses and Certification

The following courses might prove very useful for the Goldman Sachs process:

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- Probability and Statistics: make it a point to revise the first 3 chapters of the course before the interviews. They ask a lot of probability questions.
- Data Structures and Algorithms: it is necessary to be conversant with standard algorithms like sorting algos and graph algos to solve more complex problems.
- Any course from Data Science/ML will be helpful: Data Mining (in my case) / Machine Learning / Foundations of Data Science
- Courses like OOP, DB, and OS might be helpful for CS-based MCQs.

Other Relevant Information

- Do not discount the importance of good communication. Have a few mock interviews to prepare for the interview. PU generally provides mock interviews with seniors to the shortlisted candidates: do avail it.
- Take time preparing your resume - highlighting your best in it - and also be ready to speak at length about anything you mention in the resume.
- For the Goldman Sachs process specifically, it will be a good idea to have some practice in puzzle-type questions (can find it on GFG). The question I was asked was very similar to a problem I solved the day before ;).

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Sector: IT

Name: *Preetika Verma (2019A7PS0088P)*
Company: Google
Profile: Software Engineering Intern

Recruitment Procedure

- Online Coding round. It had two difficult questions.
- Resume shortlisting
- Interviews :
    - There were a total of two interviews, each one being eliminatory in nature. They asked me to code on Google docs.
    - First interview - data structure design. I was given a list of 4-5 requirements for my data structure. The question was open-ended and the interviewer kept on changing the constraints and asked me to explain approaches. After telling the time and space complexity for all approaches, I was asked to write the code for one.
    - Second interview - It was based on graphs. I had to modify Dijkstra a little and then use DFS. Interviewer asked questions about time and space complexities of various graph algorithms. I was also asked a lot of questions on single source shortest path algorithms.

Sources of Preparation

Interviewbit, Leetcode, Geeksforgeeks archives, Cracking the coding interview

Courses and Certification

DSA

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Other Relevant Information

- My interviews were completely based on DSA and I was not asked any questions on OOP, OS, DBMS or my resume.
- I was also asked to write comments about all assumptions that I was making during coding as they would review it later . It is important to clarify about edge cases as they may create a problem later during implementation.
- CGPA was important during resume shortlisting.

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Sector: IT

Name: *Meenal Gupta (2019A7PS0243P)*
Company: Google
Profile: Software Engineering Intern

Recruitment Procedure

- Online Coding round consisting of two difficult Competitive programming questions.
- Resume shortlisting
- Interviews :
    - There were a total of 2 phone interviews, each one being eliminatory in nature. They were conducted over Google Meet; coding being done on a shared Google doc.
    - First interview - Design of an algorithm to return a random choice out of a given array keeping some constraints in mind (Medium question, queues). I was given a list of 4-5 requirements for my data structure. The question was open-ended, and the interviewer kept on changing the constraints and asked me to explain approaches. After telling the time and space complexity for all approaches, I was asked to write the code for one.
    - Second interview - It was based on Graphs. I was given a set of requirements, achieving a certain functionality given constraints and conditions. It was a modeling problem basically. The input could be modeled as a graph and after that the answer could be obtained by implementing topological sorting. I was asked various questions about the time and space complexity of the approach, along with the most efficient way to take input and display output.

Sources of Preparation

Interviewbit, Leetcode, Geeksforgeeks archives, Cracking the coding interview, Guide to Competitive Programming Learning and Improving Algorithms Through Contests

Courses and Certification

Data Structures and Algorithms mainly

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Other Relevant Information

- The interviews were based entirely on algorithmic design. There were no questions pertaining to OOP, DBMS or my resume or projects listed on it.
- A valuable tip I can give is that the interviewer wants to gauge your thought process and approach towards a question, as opposed to your CP skills. It is important to think of the best and most optimal solution to the problem proposed.
- The constraints are very loosely specified, and one must keep on asking the interviewer for clarifications on the expected functionality. You are not expected to instantly come up with the optimal solution, rather start with a less optimal one, communicate that to the interviewer, think out loud and then slowly reach a more optimized one.
- It is important to clarify about edge cases as they may create a problem later during implementation. Finally, make sure that you write a proper runnable code on the google Doc, and can write comments (this doc is later used by the interviewer for review).

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Sector: IT

Name: *Minu Rajeeve Payyapilly (2018B2A70699P)*
Company: Google
Profile: Software Engineering Intern

Recruitment Procedure

- Online Test + Resume Shortlisting, Coding Round 1, Coding Round 2, (Coding Round 3 if required), all rounds eliminative in nature.
- Online Test:
  - 2 DSA based questions of Medium to Hard difficulty with total time of 1hour
  - Online Test was difficult (personal opinion).
  - Also, it is important to maintain speed to finish both the questions. Going back to the previous question was allowed.
- Coding Rounds 1 & 2 - 45 min each held on a google meet
- Questions:
  - Short intro given by interviewer and interviewee.
  - DSA question – Discussion, followed by approach explanation, and finally writing code on a google doc.
  - Follow up on that question – Could be optimizing your code for a slight change in the initial question.
  - Lastly you can ask anything you would like to know about Google to the interviewer.

Sources of Preparation

- InterviewBit, Leetcode, Aditya Verma playlist (Youtube)
- GeeksForGeeks - Company wise questions, Internship/Interview Experiences
- Pramp - For mock Interviews

Courses and Certification

Data Structures and Algorithms

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Other Relevant Information

- They are strict about the coding round time limit of 45 min which includes all the above mentioned steps so keep your introduction as short as possible, they won't stop you if you start explaining about your work plus it's possible that the interviewer gives a longer intro so minimize time from your side.
- THINK OUT LOUD: Even if you are not able to find the most efficient method to solve the question, keep discussing what you are thinking. Practice thinking out loud beforehand in mock interviews.
- Google focusses on scaling their products so be prepared on optimizing your code for huge inputs.
- During the last 4-5 min when you get the opportunity to ask questions try asking questions based on the projects that the interviewer mentioned in his introduction or about any particular product you are interested in.
- Try avoiding generic questions like "How has your experience been?"
- Don't ask questions regarding your performance.
- In effect you only have 30-35 min to solve the questions. In case you get stuck at any point ask the interviewer if you are proceeding the right way.

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Sector: IT

Name: *Tushar Garg (2019A7PS0104P)*
Company: Google
Profile: Software Engineering Intern

Recruitment Procedure

- Online Coding Round – Two questions were given and the duration was 1 hour. I solved one question with all the test cases passed. It is important to note that the results of online coding rounds are just part of the process. Google sees the complete resume that we share along with the online coding
  scores to shortlist students after this round.
- Technical Interview 1 –
  - This was an online coding interview. I was asked to introduce myself and one follow up based on my introduction.
  - Then we straight jumped on to a coding question based on graphs. We were asked to write the code on a google doc that was shared between the interviewee and the interviewer while we were on a google meet.
  - After solving it, we moved to another question which was a follow up of the previous question. We discussed the solution, however we couldn't implement it due to a lack of time.
  - However, the interviewer was satisfied. The last 5 minutes were scheduled specially for some questions from the interviewee side.
  - I asked about the workplace environment the company has and the interviewer was more than happy to tell me about it. I received the mail regarding the next interview 5 minutes after the completion of this round.
- Technical Interview 2 –
  - This round was exactly the same as the previous one. We again had two questions, the latter being the follow up of the previous.
  - We discussed both the solutions and I implemented both completely as well. The follow up was a little tough, however as long as you are thinking out loud, the interviewers are kind enough to drop hints for you. I picked up the hints and implemented the final solution. Again the last 5 minutes were for any questions from my side.

Sources of Preparation

InterviewBit, GeeksForGeeks, Cracking the Coding Interview Book

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Courses and Certification

Data Structures Algorithms knowledge is the most important to crack this internship. We were told in the doubt clearing session itself that OOP, DBMS or any other questions related to any specific language ‘can’ be but are not generally asked. And neither were they asked from me.

Other Relevant Information

Soft Skills also play a part in the interview process. Leading the conversation from the start makes your interviewer drop hints more frequently. Also do practice mock interview sessions with your friends. It helped me a lot.

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Sector: IT

Name: *Akshat Lal (2018B4A70051P)*
Company: HILTI
Profile: Software Engineering Intern

Recruitment Procedure

- 3 Rounds: Online Test, Technical Interview and HR Interview
- CGPA Cut-off: 7
- Online Test: 1 coding question. MCQs from OOP, DBMS, OS, Networking, Probability & Statistics. In total there were 6 sections.
- Coding problem: Implementation of LRU cache with a slight modification (LRU Cache Implementation - GeeksforGeeks)
- The coding question was easy. The important aspect was to have sound knowledge of core CSE concepts and speed to finish all questions. Total time was not divided into sections, and you could revisit them.
- Technical Interview Round:
  - Tell me about yourself.
  - Project discussion. They will go deep into the projects, your role in them, tech stack used.
  - Discussion on the coding question that was done in the coding test.
  - Favourite Data Structure and why is it so. Upon my answer of binary tree, a question was asked on the same; write the pseudo code to check if a binary tree is symmetric.
- HR Round:
  - Brief intro.
  - Tech stack that I would like to work on and why.
  - Future plans for yourself.
  - Where do you see yourself in 5 years?
  - Since I had changed my tech stack quite often, I was asked that while this is good from a learning point of view, how do I get myself into the same tech stack in the same company for a couple of years at least.

Sources of Preparation

GeeksForGeeks, CodeForces, LeetCode

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Courses and Certification

Focus on DSA, OOP, DBMS.

Other Relevant Information

- There are two things that are tested in general: Your resume and your technical capabilities.
- Have a sound resume with a couple of good projects that you can talk about for a couple of minutes. Never put anything in your resume that you are not confident about.
- Have a sound knowledge of DSA. Basic OOP and DBMS should be enough. Revise questions asked by the company from LeetCode or GFG in the previous years, since companies tend to repeat/ ask similar questions in coding/ interview rounds.
- For interview: Always be confident. If you cannot come up with a solution immediately, start with brute force and work your way up. Always communicate what you are thinking. The interviewer can help you and correct you in the right direction. The interviewer looks for your thinking process and communication. Try writing neat code with meaningful variable names and comments (for interview).
- Never say yes to “Do you want to go for higher studies?”. Companies often take this as a red flag. Read about the company you are to interview for. Prepare company specific questions and ask the interviewer in the end. This shows your interest in the company.

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Sector: IT

Name: *Amisha Mishra (2018B4A80825P)*
Company: HILTI
Profile: SWE Intern

Recruitment Procedure

- Online test- Asked questions based on fundamentals of CS. Respective topics were Operating systems, Basic c/c++, Object Oriented Programming, Networking, Database management systems, Logical Reasoning (only timed section) and 2 basic coding questions (Easy on leetcode).
- Technical Interview- Interviewer first asked to introduce, then asked about my recent projects. Then they asked me what skills from all the topics asked in online tests I was comfortable with. Being from a non-CS background, I asked them politely to test me on DSA. They then asked 2 coding questions, both leetcode easy.
    - The first question was to convert a number into its binary form.
    - The second question was to find the shortest valued node in a binary tree.
- HR round- The HR was very friendly and this round was the easiest out of all. He asked me about my recent projects and asked me about my further interests in this domain. He also asked some behavioral questions in between.

Sources of Preparation

Leetcode, GFG, Interview bit

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Sector: IT

Name: *Bharat Naveenchandra Gupta (2019A3PS0181P)*
Company: HILTI
Profile: SDE

Recruitment Procedure

- Online test: Easy test with a lot of questions. Multiple choice questions from OS, OOP, DSA, DBMS and 1 problem to code for. Time management was important and clarity in just the basics was sufficient.
- Technical Interview: Basic questions like explaining the time and space complexities of various sorting algorithms were asked. (Since I mentioned computer architecture as my main interest, I was asked about the bugs, 'Spectre' and 'Meltdown'.)
- HR round: Generic questions like *Tell us about yourself* and *Where do you see yourself in the next 5 years*. The interviewer talked about the company's plans for the new software division and the workspace culture.

Sources of Preparation

Online courses for DSA and websites like InterviewBit for practicing would be sufficient.

Courses and Certification

A good knowledge of various data structures and algorithms along with some entry level knowledge in OS, OOP, DBMS would be enough for the online test.

Other Relevant Information

For online tests, solving a huge number of questions at a decent pace is very important. The subsequent interviews are there to check your knowledge in basic concepts and judge how well you can fit into the company and the role being offered.

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Sector: IT

Name: *Devanshh Agarwal (2018B4A30889P)*
Company: HILTI
Profile: Software Intern

Recruitment Procedure

- Online test, Interview
- Online Test had multiple sections:
    - Coding: One medium difficulty coding question which could be done using hash maps.
    - Logical Reasoning: 30 questions varying from mathematical aptitude to data interpretation to grammar. This section was timed separately and couldn't be revisited.
    - Programming Concepts: Checked conceptual clarity of programming in C.
    - OOP
    - Other sections included DBMS, networking and OS.
- Technical Interview (45 mins):
    - Brief introduction about myself.
    - Then I was asked 2 questions on DSA one of which was medium and the other one was easy.
    - Following that a theoretical question on implementation of hashing was asked.
    - There were some basic OOP questions and 2-3 DBMS questions.
    - Then I asked some questions to the interviewers about the company and their work.
- HR round (20 mins):
    - Brief introduction
    - This was followed by a brief discussion on my resume.
    - Then the HR asked about my field of interest and my future plans and so on.
    - The HR round was just a conversation of him asking about me and me asking about him and the company.

Sources of Preparation

- GFG for DSA concepts.
- Practice DSA questions on Leetcode and GFG.
- Learncpp for C++ syntax and OOP in C++.

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Courses and Certification

Mostly practice DSA questions as much as you can. Can refer to the DSA course on GFG. You should also be familiar with OOP and a bit of DBMS.

Other Relevant Information

- For the online test, focus on solving coding questions first followed by logical reasoning and then go on with the section you feel comfortable.
- The interviewer asked me to write only pseudo code for both DSA questions but had it dry runned for some test cases.

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Sector: IT

Name: *Kartikeya Kansal (2019A3PS0329P)*
Company: Hilti
Profile: Software Engineer Intern

Recruitment Procedure

- Resume Shortlisting, Coding Test, Technical Interview, HR
- The coding test had 6 sections
  - Aptitude
  - DSA
  - DBMS
  - OOP
  - OS
  - Coding
- The sections weren't individually timed but it was important to maintain speed as only 2 hours were given for the whole test.
- Coding questions were fairly easy and short. All other rounds were MCQ.
- The technical Interview was very thorough and required deep knowledge of the subjects mentioned in the Resume.

Sources of Preparation

- For coding and DSA, practice on sites like InterviewBit/Leetcode.
- As for OOP, DBMS and OS, first, understand the concepts from Youtube and after that search for the common questions on these topics by InterviewBit.
- For Aptitude search for puzzles on GeeksforGeeks.

Courses and Certification

No subject was asked particularly. Subjects mentioned in the resume must be prepared thoroughly.

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Other Relevant Information

The coding Test and the technical interview tests your knowledge in all basic verticals of Computer Science. The HR interview is just conversation but can catch you off-guard with questions like: ‘Why Hilti when there are companies like Microsoft, Google, Apple?’

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Sector: IT

Name: *Rishika Jain (2018B1A70302P)*
Company: Hilti
Profile: Software Engineering Intern

Recruitment Procedure

- The recruitment procedure: Online Test, Technical Interview and HR Interview
- CGPA cutoff: 7
- **Round 1, Online Test**
  - MCQ, Coding question. The test had 7 sections with 61 questions
  - The duration of the online round was 90 minutes.
  - The sections were Coding skills, cognitive ability, DSA, DBMS, Networking, OOP, and OS.
- **Round 2. Technical Interview**
  - I prepared mainly by revising various concepts in OOP and DBS. Some of these were also asked in the interview.
  - I went through some of the past interview questions of the company that is available on GeeksForGeeks.
  - There was a single coding question, where I had to write the code to reverse a linked list in C++.
  - Apart from this, the time complexities of various sorting algorithms were asked. Several questions about OOP and DBMS were also asked.
- **Round 3. HR Interview**

Sources of Preparation

- InterviewBit, GeeksForGeeks, Leetcode
- Important Courses: OOP, DSA, DBS

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Other Relevant Information

- Focus on the time and space complexity of the code that you write.
- Solve previous year company questions fromGeeksforgeeks and Interviewbit. Refer to GFG company archives before coding tests and interviews and also the previous year internship questions and current placement season problems. Most of these get repeated.
- The recruitment procedure is focused more on having a sound base in the DSA, DBS, and OOP. The coding questions were pretty easy but a stronghold on basic concepts was expected in both the interviews and the coding round.
- Start early and consistently practice coding questions. Focus more on topics like dynamic Programming and Graphs. Also, keep your OOP and DBS basics strong. If you can't solve the coding question, hard code the trivial cases.
- Always ask 1-2 questions from the interviewer whenever he asks you to do so. Read in detail about the projects that you write on your resume.

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Sector: IT

Name: *Sahil Agarwal*
Company: HILTI
Profile: Software Engineering Intern

Recruitment Procedure

- Online Test, Technical Interview, HR Interview
- CGPA cutoff: 7
- Online Test: 6 sub-parts
    - Coding (Write the program)
    - Logical reasoning(50 MCQ Question)
    - Data Structure (MCQ Questions)
    - DataBase (MCQ Questions)
    - Networking(MCQ Questions)
    - Operating Systems(MCQ Questions)
- Technical Interview: The interviewer asked Coding questions about DSA -(binary tree and greedy problem)
- HR Interview:This was the third round after the technical interview.

Sources of Preparation

- Geeks for Geeks
- BITS Course Work
- Interviewbit

Courses and Certification

- Courses to be focused on :
    - Networking
    - Operating Systems
    - DSA
    - DBMS

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Other Relevant Information

- Always be confident in what you are saying and always have an explanation of the questions they ask.
- Have a basic understanding not deep of topics on courses like Networking, Operating Systems, DBMS
- Stay calm and be yourself

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Sector: IT

Name: *Yuvraj Raghuvanshi (2019A7PS0080P)*
Company: HILTI
Profile: Engineering - Web/Software

Recruitment Procedure

- Coding Round:
  - The first phase was an online test of 1 hour 30 mins. It had 61 questions in total divided amongst 7 sections.
  - The first section had a single coding question which was easy-medium level and as far as I remember was related to sorting the array and then manipulating it to get a unique minimum sum.
  - The second section had 30 Cognitive ability questions which had a timer of 30 mins. This section was the only timed section.
  - The other 5 sections were untimed and were on the concepts of DBMS, DSA, OOP, Networking and Operating Systems.
- Interview 1:
  - There were 2 interviewers in the meeting. They introduced themselves and then asked me to introduce myself.
  - After the introduction and telling about my work experience, the first interviewer took a liking to my project on "microservices" and asked me a lot of questions about it. I answered all of them and he seemed satisfied with my answers.
  - Then he asked me to write code for the asked problems. He asked to sort a collection of objects based on different fields of a given Structure/Class along with the code.
  - He continued with asking questions related to linked lists and detection of different types of linked lists along with code.
  - Then he asked a simple DP question and I wrote the code for it. He further asked more DSA questions and I answered all of them.
  - The second interviewer then asked questions on recursion along with their code and finally asked an easy puzzle which I was able to solve. (https://www.geeksforgeeks.org/puzzle-7-3-bulbs-and-3-switches/)
- Interview 2: This was a HR interview. I was again asked to introduce myself and standard HR questions. This was a great experience as the interviewer was very friendly. This round lasted for about 40 mins.

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Sources of Preparation

InterviewBit (started after 2-2), LeetCode, GFG archives

Courses and Certification

DSA, DBMS, OOP, all CDCs.

Other Relevant Information

- Research about the company before appearing for the interview. Also, go through all the standard HR questions once before the interview.
- Make sure the interviewer is able to understand your thought process of building up the solution from scratch.
- Don't panic if you're not able to arrive at the solution. The interviewer will try to give you hints when you are stuck, make sure you try to catch up to those hints.

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Sector: IT

Name: *Anant Verma (2018B1A70685P)*
Company: Microsoft
Profile: Software Engineering Intern

Recruitment Procedure

- Resume shortlisting, Online Test, Technical Interviews
- Online Test had 2 questions and the time given to solve them was 90 minutes. You were allowed to move freely between the questions. However, you were not allowed to edit your code once submitted.
- Candidates who got shortlisted from the Online tests were supposed to sit for Interviews and for me there were 3 interviews and all of them were technical in nature. Following are the coding problems that I was asked:
    - 1st round – Given a binary tree, a target node and an integer k, return all the nodes which are k distance away from the target node.
    - 2nd round – Return a deep copy of a given linked list where each node has 2 pointers – a next pointer and a random pointer. After giving a solution with O(n) time and auxiliary space complexity, I was further asked to solve the question using O(1) auxiliary space complexity.
    - 3rd round – Airplane routes were given which included source city and a destination city for each flight. Initially I was asked to find a flight path which covered all the cities and after that I was asked to find a path such that all the routes are covered. Basically, digraph was supposed to be made (nodes = cities, directed edge from u to v => u source city and v destination city) and to solve the first one you have to find a path such that all nodes are visited and for the second you have to find a path such that all the edges are visited. (Loops were possible)
- Other questions from all the rounds covered knowledge about C++ (it was the primary language), pros and cons of Data structures and some were also based on my projects.

Sources of Preparation

InterviewBit, Geeks for Geeks and Leetcode

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Courses and Certification

Relevant courses for IT Internships include – DSA, OOP and to some extent DBS. Depending upon the job profile you might also be expected to know about P&S, M2 etc.

Other Relevant Information

Always be confident about yourself in the interviews and have a never-give-up attitude and make sure that you are continuously communicating your thoughts to the interviewer.

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Sector: IT

Name: *Chirag Vachhani (2019A7PS0041P)*
Company: Microsoft
Profile: SDE

Recruitment Procedure

- 1 coding round -> 2 technical interviews -> 1 (technical + hr) interview
- The test was of 95 mins and had two easy questions, one of bit manipulation and the other of dfs. Shortlisting was done based on solving time. People who solved both questions in less than 30 mins were selected for interviews.
- Round 1 had two medium questions
    - https://leetcode.com/problems/generate-parentheses/
    - https://www.interviewbit.com/problems/meeting-rooms/
- It was important to right clear and efficient code. Don't forget edge cases and dry run the code once before coding it out.
- Round 2 had one easy question of sorting number plates, edge cases and modularity of code was the main focus of the interviewer.
- Round 3 was with a senior manager. We had an in-depth discussion about my PS-1 project, be ready for any questions related to your project. Had some questions on DBMS, then came to hr questions like my weaknesses and strengths, how I handle stress etc. Don't lie, be yourself and support your qualities with examples. Highlight your leadership roles and show instances where you took initiative.

Sources of Preparation

For the basics of DSA and OOP in C++, coding ninjas is pretty good. Practice a lot from Leetcode and InterviewBit. Definitely watch Aditya Verma's playlist for DP. His other playlists are great as well for interviews.

Courses and Certification

Core CS subjects like DSA, OOP and DBMS.

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Other Relevant Information

Keep your cool during interviews, be confident and listen to the interviewer. They give you hints and want you to succeed. Have mock interviews with seniors and keep practicing coding throughout the season.

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Sector: IT

Name: *Chirag Wadhwa (2019A7PS0103P)*
Company: Microsoft Corporation
Profile: Software Engineering Intern

Recruitment Procedure

- Resume Shortlisting, Online Test, Technical Interview
- Online Coding Test (90 minutes) -
    - 2 coding questions on Codility platform
    - Difficulty level – Easy
    - 1st was a basic graph problem, to find the number of different sized ships (size 1, 2, and 3) on a 2D binary matrix where 1 denoted the area on a ship and 0, water.
    - 2nd question was a basic bit manipulation problem – Find the longest subsequence of the array such that AND of all its elements is greater than 0.
    - The test was easy with more than enough time. Many people who scored full could not make it to the shortlist. Tip – finish the paper as fast as possible, the time completion might be a deciding criterion, not sure though.
- Technical Interview – The interviews were conducted on codility platform. We were asked to join an MS teams video call and the link for the codility platform was sent there.
- Tip – wear formals, a shirt along with a tie should suffice. Take appropriate sleep the night before and calm yourself before the interview begins.
- Round 1 (1 hour) –
    - A quick introduction
    - 10 minutes discussion on a project that I mentioned on my resume. Basic questions on how API requests are handled at the server and what happens in case of some failure were asked.
    - 1 very easy coding question was asked – given the current position of a knight and its next position, return a Boolean indicating if this move is valid for a knight or not. This was further extended for a bishop. One last extension was if given the position of all other pieces on the board, take care if any piece lies between the path from current position to next position for the bishop.
    - I was asked to put forward any questions that I had. I asked the interviewer about the work culture and his experience at Microsoft. This discussion went on for 5-10 minutes.
- Round 2 (1 hour) –
    - A quick 5-minute introduction and questions on hobbies and fields of study.
    - 1st coding question asked was – given two integers dividend and divisor, return the

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quotient without using the division, multiplication, and mod operators. It is a standard question, but I saw it for the first time. Instead of doing it with bit manipulation, I tried to reduce the complexity of the brute force solution in a different way. Although my answer was not the most optimal, the interviewer was impressed with my approach. I was then asked to handle all the corner cases.

- 2nd question was a standard binary search question - given a sorted array of integers and a target value, find the first and last position of the target value in the array. If it's not present, then return -1. I answered this question quickly. I was asked a couple question on the while loop termination condition of my binary search approach.
- I was asked to put forward any questions that I had. I asked the interviewer about the work culture and his experience at Microsoft. This discussion went on for 5-10 minutes.

- Round 3 (30 minutes) –
  - A quick introduction. I was asked how my previous interviews went.
  - He then jumped straight to the coding questions. I was asked 2 coding questions.
  - 1st question – given two integers sum and n, print all the combinations of n integers (repetition allowed) that sum to the given sum. The interviewer did not expect me to explain anything to him but just code a working solution quickly.
  - 2nd question – given the name of an excel column, return the integer value representing the column number. This is a very standard question. Again, I was supposed to code it down without providing any explanation. I was able to finish both the questions quickly. Tip – do not panic at all. I saw the second question for the first time even though it is a very standard problem. If that happens, take a deep breath, and calm yourself down. Just remember if you have practiced enough, you should be able to do it easily.
  - I was asked to put forward any questions that I had. I asked the interviewer about the work culture and his experience at Microsoft. This discussion went on for 5-10 minutes.

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Sources of Preparation

Practicing easy and medium questions along with some standard hard problems on Leetcode and InterviewBit is more than enough. Questions asked are generally very standard. Make it a point to manage your time properly and submit the paper with the correct solution as quickly as possible. Other sources include –

- GeeksForGeeks
- DSA/OOP/DBS from college notes/slides and online articles from GFG and IB

Courses and Certification

Nothing in specific was required. The questions asked in the test as well as in the interview were standard DSA based questions. Tip – practice a few behavioural questions in case there is an HR round.

Other Relevant Information

- Prepare all the topics beforehand as interviews are mostly within 1 or 2 days at max after coding round results so you won't get time to prepare.
- Take a good night's sleep before the interviews, I didn't sleep before the interviews as I didn't brush up my CS fundamentals and had interviews for 2 companies the next day. I will never recommend this as the interview day is very dynamic and you have to sit in front of the screen for a long time and you never know when they will call you for the subsequent rounds. Prepare all the things well before time and sleep for at least 7 hours the night before.
- All the best to everyone reading this for their interviews and if you haven't been shortlisted yet, don't worry there are plenty of awesome companies that visit our campus, study hard and ace them!

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Sector: IT

Name: *Paul James Kallumkal (2019A7PS1134P)*
Company: Microsoft
Profile: SDE - Intern

Recruitment Procedure

- **Online Test**
  - The test was for about 60-80 mins and there were 2 coding oriented questions
  - Both questions were fairly simple, so it was necessary to solve them before the time limit.
  - I was done in 20 mins and there were many students with a full solve and higher CG that didn't qualify for interviews, since they submitted later
- **Interviews**
  - I had two rounds of interviews, though most candidates that were selected had three rounds
  - **Explain your approach and explain every single line of code as you type it.**
- **Round 1**
  - As with most interviews I've faced, the initial round was with a relatively younger employee and I was asked this question on data structures and algorithms
  - My solution was a bit longer and more complicated than ideal, but it displayed my knowledge of bfs, dfs, stacks and queues while providing the answer
  - Brush up on DSA and ensure you're able to quickly construct trees/graphs as needed to test your code
  - I was then asked a few theory questions on OOP including polymorphism, declaring parent objects with child constructors, how inheritance affects visibility of class members and constructor/destructor call order with inherited abstract classes
  - The interview ended on a fairly good note despite my slow start. I'm thankful to the interviewer that set up a really good vibe.
- **Round 2**
  - This round was with a senior employee who focused entirely on my resume
  - I had to explain all of my projects and courses in detail
  - One of my projects involved Steam and Discord integration. The interviewer wasn't aware of either platform, so it was tricky to explain the exact purpose of the project, but I gave it my best shot.
  - Overall, this interview was smoother and was closer to a casual conversation than a technical test. I was very confident in all the statements I made, since it was

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focused around my resume
- I asked a few questions regarding the work culture and the possibility of sponsored higher education to show my genuine interest in the company

Sources of Preparation

- Interview Bit (Interview type coding questions)
- GeeksForGeeks (Puzzles, OOP concepts)
- Codeforces (Contests help practice for coding rounds)

Courses and Certification

- Nothing in particular apart from college CS courses
- Self taught across a variety of languages and frameworks

Other Relevant Information

- CG matters more than you'd think, companies tend to have invisible cutoffs and biases towards higher CG students. (but you're probably reading this a few days before your interview/test)
- Be confident in whatever you say and try to match the interviewer's energy.
- Be very serious if faced with an interviewer who immediately begins with questions.
- Smile back if the interviewer smiles at you, matching the energy and creating a good vibe goes a long way with good impressions.

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Sector: IT

Name: *Prachi Agrawal (2018B5A70716P)*
Company: Microsoft
Profile: Software Engineering Intern

Recruitment Procedure

- Procedure: Online Assessment Round, Interview Rounds
- Online Assessment:
  - Consisted of 2 coding questions of medium difficulty
  - Once the code is submitted, changes can't be made. So, it's important to make sure that the code covers all the cases before submitting. Submission time could be a factor for shortlisting.
  - One of the questions asked in this round was similar to https://leetcode.com/problems/number-of-islands/
- Interview Round 1, Round 2:
  - These rounds are technical in nature and last around 45 min. 1 or 2 coding questions are given and they must be solved and coded with proper discussion of edge cases.
  - The questions are not very difficult and are very standard questions. One of the questions I was asked was to explain what a cache is and different strategies for caching and then design a LRU cache.
  - The second question was to find the sum of the last k elements of a linked list. Some of the constraints may not be told and it is expected to ask questions and seek clarifications on the problem with the interviewer.
  - I'd also recommend that you ask for hints if you feel stuck. Questions on OOP, CS fundamentals were also asked- like the difference between struct and class, principles of OOP etc.
- Interview Round 3:
  - This was a resume discussion and behavioural round. There was an in-depth discussion of everything that I had put on my resume.
  - Prepare a bank of questions that you can ask the interviewer at the end of each round.

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Sources of Preparation

- Geeks for Geeks Interview Experiences (important)
- Leetcode

Courses and Certification

Data Structures & Algorithms, Object Oriented Programming are the most important topics. Questions from Database Systems could also be asked.

Other Relevant Information

- Be confident during the interviews and communicate well.
- Do not make assumptions and seek clarifications from the interviewer.
- Do not hesitate to ask for hints if you are stuck.
- If you do not know the answer to a question or have not studied a topic, politely inform the interviewer that you have not studied it.

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Sector: IT

Name: *Rimjhim Shukla (2018B2A40742P)*
Company: Microsoft
Profile: SDE Intern

Recruitment Procedure

- Coding test for Microsoft Engage, Project building phase, Interview round
- I had registered for the Microsoft Engage program:
    - The screening for the same was done through a coding test with MCQ questions.
    - A significant focus was towards searching and sorting algorithms and time complexity.
    - Make sure to have a clear understanding about the number of iterations after which an array would be sorted through a given sorting technique.
- After I cleared the coding round, I was assigned a mentor from the Microsoft team. The project was to develop a video calling website.
- At this step, make sure to stay in constant touch with your mentor, let him/her know about the challenges being faced, how you debug and work your way through different issues.
- Try to effectively utilize the 1:1 mentor sessions with your mentor. Also, try to seek more help from the open source community (like, stackoverflow) than Youtube videos. That helps build the concepts.
- In case, you are not able to do much in the project, do not fret. Make sure to have a strong grasp over DSA concepts for the interview rounds. A good thing is, almost everyone gets a chance to appear for an interview.
- Based on the project score and mentor feedback, some students were given a direct offer, while others had a varying number of interview rounds (ranging from 1 to 3).
- During my interview (I had one interview round called the AA round) the questions that were asked included:
    - Detailed discussion about project: Make sure to have a deep understanding of the project. For instance, since my project included developing a video calling website, the questions I was asked ranged from WebRTC to web sockets and differences between TCP/UDP, security issues. It is okay to not know everything, but I would suggest you to convey that asap.
    - Questions on OOP
    - Coding question
    - How would you test your code

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Sources of Preparation

Leetcode, Geeksforgeeks

Other Relevant Information

I have heard many times from my friends that it is a must to do InterviewBit to crack coding rounds. This is not true. While solving those questions will surely help, not solving them does not mean you are at a loss. Practice a lot of questions on whichever platform you are comfortable with because in the end, it is the problem solving ability that matters.

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Sector: IT

Name: *Saiyam Bhatnagar (2018B3A30883P)*
Company: Microsoft R&D
Profile: SDE intern

Recruitment Procedure

- **Online test –** The coding round was held on Codility and a total of 2 questions were asked. The first question was on bit manipulation while the second was a simple DFS question. The coding round was very easy. Therefore, we had to take care of the submission time as well.
- **Interviews –** A total of three interviews were conducted. All of them were technical in nature and almost an hour long.
    - **Interview 1 –** A couple of easy-medium DSA questions were asked. It is really important to code the entire solution and take care of the edge cases at the same time. A few trivial logical puzzles were also asked.
    - **Interview 2 –** The round started with a 20-25 minutes long resume discussion. I was asked about the in-depth working of a Python library which I had used in my Data Science Project. Post the discussion, we were required to code a working solution of a medium level DSA problem.
    - **Interview 3 –** This is the final interview and was taken by a senior Microsoft employee. My background and interests in Computer Science were talked about and there was in-depth discussion about an internship. I was asked a medium level DSA problem on backtracking.

Sources of Preparation

Geeks for Geeks, Leetcode, Interviewbit, 450 questions DSA sheet (easily available on internet)

Other Relevant Information

Interviews for an SDE intern at Microsoft are pretty trivial. One just needs to be logically sound in Data Structures and Algorithms to get through them. A couple of decent projects are always a plus point. Knowledge of Object-Oriented Programming is also a plus point.

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Sector: IT

Name: *Shivam Agarwal*
Company: Microsoft
Profile: Software Developer

Recruitment Procedure

- Total 4 rounds. 1 online coding round and three interview rounds.
- Online Coding Round : It had 2 questions and the time limit was from 60-90 mins. The questions were easy, most of us were able to do them. But time was the key factor. People who submitted early got shortlisted.
- First Interview Round:
  - We first started with a small introduction followed by a coding question. I had to write the code on the codility platform.
  - I was asked which topics I am comfortable with. I told her tree and some other topics.
  - Then she gave me a question on trees related to subtree sum. It was easy and I was able to successfully code it up.
  - She extended a question a little and I managed to do that as well.
- Second Interview Round:
  - It was an hour-long interview. We directly jumped into a coding question.
  - The coding question included a robot and a 2D matrix which has some obstacles and on every obstacle he has to take a right turn of 90 degree. We have to return the maximum blocks traversed.
  - The implementation was a little tricky and when we will terminate the problem was the one thing to come up with.
  - I was not able to complete the code(the termination condition was left to be coded). I was explaining each and every line of code. I continuously took his validation at every step. So in the end even though I was not able to run the code he knew that the logic and code is almost correct.
- Third Interview Round:
  - There was no coding question. She started with discussing my resume. Then we started talking on one of my projects and how to scale it. It went to a little bit of System design type of questions.
  - Then she asked me about OOP (exception handling and inheritance). I was not able to answer a few of the OOP questions but she was satisfied with my overall interview.

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Sources of Preparation

InterviewBit, Leetcode, reading lot of Interview Experiences on GFG

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Sector: IT

Name: *Siddharth Kumar (2019ABPS0539P)*
Company: Microsoft
Profile: SDE Intern

Recruitment Procedure

- I was an Engage'21 Candidate, I was fast-tracked to the final round of the interview.
- It was a combination of technical and HR questions.
- Started off with the projects on the resume, then the interviewer quickly figured out that my DSA was strong, so he asked questions on OS and DBMS.
- After that he asked how can you make existing Microsoft products better, as in which features will you add to a product (It was Microsoft Teams in my case).
- After that he asked HR questions till the end.

Sources of Preparation

InterviewBit, HackerRank, GeeksforGeeks

Courses and Certification

Focus on DSA, OS, OOP, DBMS

Other Relevant Information

- Have a deep understanding of everything you put on your resume.
- Some understanding of Systems Design will also help you in the interview.

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Sector: IT

Name: *Soham Bhowmick (2019A8PS0350P)*
Company: Microsoft
Profile: Software Engineering Intern

Recruitment Procedure

- Online Coding Test and 3 Technical Interviews
- Online Test:
  - It was on Codility and had two coding questions to be solved in 1.5 hours.
  - The first was a DFS based question on finding the number of battleships on a board.
  - The second was related to bitwise operations and we were asked to find the largest possible subset such that AND of all the elements was greater than zero.
  - Submission time was also taken into account while shortlisting.
- Interview Round 1:
  - It started with an introduction and the interviewer asked me about the frameworks and languages I used for web development.
  - He then asked me to share my screen and implement a Hashmap in any code editor of my choice. I went with a very simple MOD-based hash function and implemented the data structure using arrays and linked lists.
  - Asked questions and interacted with the interviewer whenever I ran into a problem, and he gave appropriate hints wherever required.
  - In the end, he said he was satisfied with the solution and asked if I had any questions for him.
- Interview Round 2:
  - I was asked a graph-based question very similar to Course Schedule II - LeetCode but it was framed in a different way.
  - Initially suggested a brute-force approach and then explained how it could be improved using Topological Sort. I then coded the solution and he asked me to run it on a few test cases. He asked a few questions on sorting and concluded the interview.
- Interview Round 3:
  - The round started with a discussion of the previous rounds. I was asked to explain a project which led to a detailed conversation about it and continued for the next 30 minutes.
  - He then asked a coding question similar to Add Two Numbers II - LeetCode. explained my approach and coded the solution. It initially had a few bugs which he

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asked me to find and I corrected them. The interview ended with him taking questions.

Sources of Preparation

Leetcode, InterviewBit, GeeksforGeeks

Other Relevant Information

- The interviewers are very chill and helpful. Explaining your solution well is as important as coding the right solution. Try to keep interacting while you code.
- In case you're not from a CS background, studying DSA and the basic principles of OOP online should be enough for the interviews.
- Start giving contests (Leetcode, CF, etc.) as you approach the internship season to practice time management for the coding rounds.

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Sector: IT

Name: *Yogesh Gupta (2019A8PS0435P)*
Company: Microsoft
Profile: Software Engineering Intern

Recruitment Procedure

- Resume shortlisting, Online test, Interviews
- Online test consisted of 2 easy questions. Time played a crucial role.
- For me there were 2 rounds of interviews. Some people had 3.
- First round consisted of 2 string questions. I was able to solve the first and partially solve the second.
- Resume played a vital role in the second round. POR, projects etc were discussed and some theory questions on heap and stacks. Lastly, a simple coding question on the linked list.

Sources of Preparation

Interviewbit, Leetcode, Geeksforgeeks.

Courses and Certification

I told the interviewer that since I was from ENI so I couldn't do the desired courses in college but have plenty of knowledge and experience about DSA and OOP. He was comfortable with that and the interview was limited to these topics only.

Other Relevant Information

Your resume matters. Questions are generally easy but you need to stand out from the rest. In my case my good competitive programming background and achievements helped me a lot.

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Sector: IT

Name: *Bhavesh Kotwani (2018B1A70614P)*
Company: Saarthi.ai
Profile: Python Developer

Recruitment Procedure

- Take home Assignment Round, Technical Interview Round
- Assignment had 8 Python questions of Python. Since the company's major product is chatbot services, there were questions for RASA based implementation.
- The Technical Interview was taken by Mr. Sameer Sinha, currently the CTO of the company. The interview questions were fairly easy and he asked me about my past projects.

Sources of Preparation

Practicing basic Python questions and theory from GFG, and other relevant sites.

Courses and Certification

No subject as such. Interns were asked easy questions from Python. Preparing these subjects could prove useful.

Other Relevant Information

- Being frank up to a certain amount with the interviewer (in my case, the CTO), helped a lot. And, I invested a lot of time in my resume, which gave a really good first impression.
- Sharing what you feel passionate about, and getting to know the company before the interview was a bonus point for Saarthi.ai.

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Sector: IT

Name: *Aditya Patwa (2019A7PS0116P)*
Company: Salesforce
Profile: Software Development intern

Recruitment Procedure

- Online Coding Round, followed by 2 technical interviews.
- The Online Coding Test was easy, all 3 questions were pretty basic.
- **First Interview** was of about 45 minutes:
  - Tell us about yourself.
  - Listed a few OOP concepts like inheritance, abstraction ,encapsulation and asked me to explain each of them with an example.
  - DSA Questions:
    - 2 Basic traversal of LinkedList question
    - Subset sum in LinkedList. and a follow up question based on backtracking.
    - 2 questions on Binary Trees.
  - OOD (design) Question:
    - Create a vending machine which can be filed with food of different types and balls of different colours.
    - More weightage given to explaining all the classes & Objects used, along with the methods created for them, rather than writing code.
- **Second Interview** was of about 30 minutes:
  - Tell us about yourself.
  - Asked me about a few of my favourite courses in college and the reason behind it.
  - Asked a design Question:
    - Create the “SNAKE GAME” (the one played in old NOKIA phones) and write its implementation.
    - Again, more focus given to the approach along with the apt usage of data structures.
    - Only meant to explain the working, no code.
  - Asked to implement inheritance, and explain how to downcast and upcast.

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Sources of Preparation

- Leetcode medium questions were more than enough to get you through the coding rounds as well as the interview DSA questions.
- Practice OOP theory and Common interview questions of DBMS from GeekForGeeks.
- Go through the design section of "CRACKING THE CODING INTERVIEW".

Courses and Certification

No prerequisites, but having a good grip over DSA and OOP proved useful.

Other Relevant Information

The interviewers are friendly so don't hesitate to ask any questions to them regarding the question. Also most questions are not meant to be solved but being able to explain your approach clearly is more important.

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Sector: IT

Name: *Aman Maheshwari (2018B4A70906P)*
Company: Salesforce
Profile: Software Engineering Intern

Recruitment Procedure

- Pre-placement talk, Coding Test, Technical Interview-1, Technical interview-2, HR interview
- Coding test consisted of 3 coding questions. Duration was 1.5hrs.
- Questions were easy to moderate level. Time wasn't an issue. Brute force solution was passing all test cases in one of the questions.
- Technical Interview- One coding question was asked. (https://www.geeksforgeeks.org/search-an-element-in-a-sorted-and-pivoted-array/).
- Interviewer asked about encapsulation and asked a simple design pattern question.
- HR round took place after that. No Technical interview-2 happened.
- Questions based on resume (projects and internship) were asked in detail in the HR round.

Sources of Preparation

Interviewbit

Courses and Certification

Knowledge in OOP, Data structures and algorithms

Other Relevant Information

Go through your resume multiple times. Try to know every possible detail about the projects that you have mentioned in your resume.

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Sector: IT

Name: *Asish Juttu (2019A7PS0039P)*
Company: Salesforce
Profile: Software Engineering Intern

Recruitment Procedure

- Online Coding Test, Technical Interview, HR + Technical Interview \
- Online Coding Test consisted of 3 questions conducted on the HackerRank platform. All 3 of them were easy and hence one had to finish them quickly.
- Following the results of the coding test and resume shortlisting, around 24 people were shortlisted for interviews.
- First round was a pure coding round with 2 coding questions. I had to code them and explain the logic as well in a language of my choice. Then I was asked theoretical questions on the concepts of OOP and DBMS.
    - They care about your thinking process so even if you don't know the complete solution tell them the partial solution you thought of. The interviewers were really nice and helpful.
    - Be sure to stay calm and relaxed.
- Second round was a mixture of HR+technical+resume questions. Be sure to visit the company's website and keep answers to questions like "Why do you want to join salesforce?" and "What do you know about salesforce?" ready.

Sources of Preparation

Interviewbit/Leetcode and GFG archives. Have some mock interviews before your real one to get a better idea.

Courses and Certification

DSA, DBMS and OOP are important.

Other Relevant Information

Just stay calm and prepare well and you will be fine. Good luck!

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Sector: IT

Name: *Dwij Mehta (2019A7PS0122P)*
Company: Salesforce
Profile: Software Development Intern

Recruitment Procedure

- Online test, followed by resume shortlisting and 2 rounds of technical interviews.
- Test had 3 competitive coding questions
    - Word break
    - A simple array problem had to be solved by subtracting the median.
    - Scheduling problems had to be solved using a custom sorting function. \
- All the questions asked in the online coding round were of easy to medium level.
- Test was overall easy. Shuffling between questions was allowed and there was no negative marking.
- Interview Questions:
    - Tell me about yourself.
    - What did you do at your PS-1/previous internship? What value did you add to the team?
    - Tell me more about your XYZ project. What difficulties did you face and what motivated you to complete the project?
    - DSA questions:
        - What is a priority queue? How is it implemented?
        - What is topological sorting?
        - How is a hash map implemented? What all methods are used to resolve collisions?
        - Time complexities of basic operations on common data structures.
        - Trie data structure.
    - OOP questions :
        - What is inheritance?
        - What is the difference between an interface and a class?
        - What is downcasting/upcasting?
        - How does inheritance promote code reuse?
        - Write code for all of the points above as a basic example.

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Sources of Preparation

- InterviewBit
- GeeksForGeeks
    - All previous years' questions thoroughly
    - All company wise questions thoroughly
    - Most common OOP and DBMS interview questions

Courses and Certification

Interns are supposed to have a good understanding of DSA, OOP and DBMS concepts. A good understanding of all these courses would be sufficient to answer all the questions asked in the interview round. However, it is not necessary to have done a formal course.

Other Relevant Information

- The online coding round is the only difficult part to crack in the entire recruitment process since companies do not reveal their exact criteria for selection. Once you get through to the interview, you should focus on getting your concepts as clear as possible.
- Interviewers at Salesforce are very helpful and understanding. They will guide you in case you face any problems while answering. However, you need to be smart enough to catch their subtle hints.

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Sector: IT

Name: *Rohit Mundra (2019A7PS0115P)*
Company: Salesforce
Profile: Software Development intern

Recruitment Procedure

- Online coding test, followed by 1 technical interview and 1 HR interview.
- The online coding Test was easy, all 3 questions were pretty basic.
- First Interview was about 45 minutes.
    - Tell me about yourself
    - Explain one of your projects
    - DSA Questions:
        - Find the longest subarray with consecutive numbers in a given array.
        - Explain how merge sort and bubble sort works
        - Reverse a linked list
    - OOPS Questions
        - Explain some OOPS concepts and why do we use them
        - What is upcasting and downcasting
    - Design Question:
        - Design a vending machine that takes coins and gives chocolate
        - Mention all the edge cases and how will you handle them
        - Mention all the cases where the hardware can malfunction and try to correct it with software
- Second Interview was of about 20 minutes:
    - Tell us about yourself
    - What do you know about Salesforce?
    - Who are the competitors of Salesforce?
    - What did you learn in the pandemic?
    - Why did you go to a boarding school (I went to a boarding school for classes 8-10) and what difference did you notice in yourself after studying there?

Sources of Preparation

- Practice 1-2 from each sub-bucket of every topic from Interviewbit
- Leetcode medium questions
- Geeksforgeeks for questions related to graph theory

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Courses and Certification

None as such, but having a good hold over DSA and OOPS is important

Other Relevant Information

- The interviewer generally is quite friendly and is there to recruit you; he wants you to win, so don't hesitate to ask questions and clarify.
- While solving a question, "think out loud", i.e. explain your approach, its time and space complexity, whether it is the most optimal approach or not, etc.

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Sector: IT

Name: *Saachi Jain (2018B2A80197P)*
Company: Salesforce
Profile: Software Engineering Intern

Recruitment Procedure

- There were 3 rounds in the entire process: Online coding round, Technical interview, and HR round
- Online Coding Round:
  - The test was conducted on HackerRank. It had 3 coding questions for a duration of 1.5 hours. The questions were of medium-hard difficulty.
  - One of the questions was similar to this. The other two were based on string and array manipulation.
- Technical Interview Round :
  - This round lasted for 1 hour. I was asked to write the code for 2 problems, and then verbally discussed the four main OOP principles.
  - Being an electronics student, I was not asked questions on DBMS and Computer Networks.
  - The 2 coding questions were medium level, based on binary search and trees (https://www.geeksforgeeks.org/zigzag-tree-traversal/).
- HR Round
  - This round was for half an hour, immediately after the technical round. Some basic questions about my resume were asked, and I was asked to explain the basic framework of one of my projects.
  - Since my project implemented several OOP principles, I was asked to code the basic classes and interfaces I used, while simultaneously explaining them. Learn every small detail mentioned on your resume very thoroughly.

Sources of Preparation

- Preparing for the coding rounds is the most important, as it is for any IT company.
- Practice all the major topics under DSA on popular competitive coding websites like InterviewBit, LeetCode and HackerRank.
- Also go through the company-specific archives on Geeks for Geeks. They have a detailed account on what questions were asked in the previous years, so it gives you an idea on what to prepare.

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- Also attending the sector-wise and company-wise mentoring sessions conducted by the PU helps a great deal.

Courses and Certification

- I did not do any particular courses. A basic idea of any one programming language (I preferred C++) is a must, so go through small, basic tutorials to learn the data structures and their implementation.
- Practicing questions regularly will help with your understanding of different algorithms.
- Also read up on OOP concepts and class implementations before you sit for the interviews.

Other Relevant Information

- Even if the process is online, always make sure you are dressed in appropriate formal attire.
- Be confident, smile, and be honest with your interviewer. They are there to help you so don't hesitate in asking questions and discussing the problems with them as you solve them.
- They want to gauge your thought process and logical ability, so communication is key.
- Also do your research about the company, and ask questions on their products or value systems.

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Sector: IT

Name: *Saarthak Mehrotra (2019A7PS0109P)*
Company: Salesforce
Profile: Software Engineering Intern

Recruitment Procedure

- The process is divided into three sections - an online test, a resume shortlist and interviews.
- The online test has 2 or 3 programming questions. Start by having a look at all questions, and solving the easiest questions first. Most of the time, the score is based on the number of test cases passed for each question.
- The shortlist is done on the basis of the score on the online test and some other criteria that vary from company to company.
- Shortlisted candidates are interviewed. I had one technical interview that lasted around 45 minutes and a small HR interview that followed immediately after that lasted for about 10 minutes. Some other candidates had an additional technical interview as well.
- The technical interview had one DSA question;. I had a graph problem that could be solved by DFS. Some other candidates were asked two questions within one interview itself.
- Following the graph problem, I was asked some basic questions on object oriented programming that were fairly easy.
- Some other candidates had also received a design problem in their second technical interview. This is a more vague problem that tests the thought process, code clarity and design more than optimisation as a traditional DSA problem does.
- The HR round is fairly light and manageable. Some questions on me, my family, where I live followed by a small discussion on the company.

Sources of Preparation

- InterviewBit for coding questions - both the online test and the DSA interview problem.
- Cracking the Code Interview - book, mainly for chapter 7 about the design problems and also for some CS core problems based on OOP, databases, and data structures
- Mock interviews with seniors - help in practicing the art of talking through your solution in the interviews
- Check the company website before the HR interview to know about what it does, core values and other things about the company that you can also ask about at the end of your interview.

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Courses and Certification

- Data Structures and Algorithms
- Object Oriented Programming
- Database Systems
- No other courses or certifications played a major role in the process.

Other Relevant Information

- The online tests are majorly for assessing the candidates programming abilities. Best to prepare from recruitment oriented sites like InterviewBit and LeetCode over pure competitive coding sites like CodeForces.
- The interview is where other skills like communication also matter. The problems are fairly manageable, and even if the problems are on the tougher end, the most optimal solution is not necessarily required to be arrived at, in the interview.
- Always keep telling the interviewer what you are thinking even while coding. Explain each line in the code. Sometimes they will not even ask you to compile the code and run the test cases. Good luck!

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Sector: IT

Name: *Saksham Pandey (2018B3A70790P)*
Company: Salesforce
Profile: SDE Intern

Recruitment Procedure

- **Round 1 Technical**
  - The round started with initial greetings with the interviewer. He asked for my introduction. I introduced myself and explained one of the recent projects on my resume.
  - Before moving to the DSA questions, he asked me questions on OOP. Some of them were as follows:
    - What is inheritance?
    - Difference between abstraction and inheritance?
    - What happens if we make the class final?
    - What is an interface?
  - Wherever possible, try to answer with an example. Most of the questions were common interview questions that one can find on GFG.
  - Then we moved on to code-pair. Given an array of numbers and a target value, you have to return the list of all the indices in pairs where the sum of two numbers in the array is equal to the target sum. Example :
    - Input: Array = [7, 2 ,4, 1 ,6 ,5 ,3 ,5]
    - Target=10;
    - Output= [[0,6], [2,4], [5,7]]
  - Don't jump to the solution as soon as the interviewer tells you the question. Always start with clarifying questions. Like can the array have data of long type or, can the array have negative numbers?
  - My approach was to fill the Hashmap or unordered map with array value and its respective index and check for the pairs equal to the target sum. I explained to him my whole approach and then wrote the code in Java.
  - Then I did the dry run of the program and tried to explain the code with the help of comments. After the dry run, I figured out that my list of the answers contained [2,4] as well as [4,2].
  - Finally, I told him the changes in my approach and was able to give the most optimal solution. He was convinced with my approach and didn't ask me to code.
  - Later he asked about the difference between a Binary tree and a binary search tree and told me to insert an element in a binary which was easy as the binary need not

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be balanced after insertion.

- **Round 2: HR based**
  - As soon as I wrote the code for the insertion of an element in the binary tree, the senior manager joined the meeting and my round 2 started.
  - It lasted for about 20 minutes. It was an easy round. Started with a basic introduction. Asked about my family members and what my siblings are doing.
  - We discussed my hometown and covid situation.
  - Later, he asked me what is one thing unique about you, what do you know about Salesforce, and the latest news about the company. The interviewer was very friendly and I didn't feel like I was giving an interview.

Sources of Preparation

Leetcode, GFG, Javatpoint

Other Relevant Information

- **While Communicating:**
  - Think out loud, say what you are thinking, and do not take long breaks
  - Always give a mock interview, ease up the tension
  - Do a dry run. You will a find few mistakes and make it proper working code, like take a proper case and an edge case for the dry run
  - Listen to the interviewer as they give hints. For example, think from this perspective or this might give you a problem or might be going in the wrong direction.
- **While implementing the code...**
  - Write proper code.
  - Try to cover edge cases as much as you can.
  - Modularise your code.
  - Proper naming of variables.
- Think twice, Code once.
- Visit the Salesforce website, what the company does, and the core values of the company.
- Lead the conversation, like by asking the interviewer how their day is going.
- Keep yourself hydrated, be confident, and RELAX. All the best for the interview.

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Sector: IT

Name: *Shailly Mantri (2019A3PS0330P)*
Company: Standard Chartered
Profile: IT

Recruitment Procedure

- **Psychometric Test**: It was a valued behaviours assessment in which there were 14 situation questions with no time limit. In each of the questions, a practical situation was given with the 4 options in which we need to drag the option in one of the two categories: more preferred or less preferred, and this round was an elimination round.
- **Online Coding Test**: This was an online coding test conducted on HackerRank platform. 10 students were shortlisted after this round.
- **Technical Round 1**: The interviewer first went through my resume and asked me to introduce myself. Then after the introduction, he asked me to explain the work I've done in my previous internships. Then he asked my projects in detail and then he jumped over the data structures and algorithms and asked me to code a problem based on strings. 5 students were shortlisted after this round.
- **Technical Round 2:** People who qualified in the previous round were invited for Technical Interview II. In this round, the interviewer wanted to know about the technology domains I am passionate about and want to work in the future. I was asked about my projects in detail. He asked me various questions on one of the projects. Then the interviewer moved on to some viva questions on data structures followed by one question on linked list and one question on recursion. This was followed by a few more questions about my resume and the courses which I have completed. 4 students were shortlisted after this round.
- **H.R. Round:** I was asked to introduce myself followed by my family background, where do I see myself in 5 years and few other generic H.R. Round questions. 3 students were selected and given the final internship offer after this round

Sources of Preparation

Leetcode and Interview Bit for coding practice.

Courses and Certification

No course as such. Having a good understanding of Data Structures and Algorithms and being

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efficient in one of the coding languages will be helpful.

Other Relevant Information

- Be really really thorough with your resume
- Be confident during the whole process and give your best.

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Sector: IT

Name: *Sourabh Nandwani (2019A7PS0035P)*
Company: Standard Chartered
Profile: Software Developer

Recruitment Procedure

- Online Coding Test, Resume Shortlisting, Technical Interview, HR
- Coding test had 2 questions
- There were 2 technical interviews, and the first interview was purely a resume grilling
- Second technical interview was with the senior vice president of the company, it began with an in-depth discussion of my resume followed by one basic DSA question
- Final round was HR round

Sources of Preparation

Leetcode, Interviewbit, Geeksforgeeks

Courses and Certification

DSA, OOP, Database Systems.

Other Relevant Information

- Mention only those subjects in your resume that you have revised and know well
- Be confident and explain everything clearly in the interview!

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Sector: I.T.

Name: *Madhav Gupta (2019A7PS0063P)*
Company: Uber
Profile: Software Engineering Intern

Recruitment Procedure

- **Online Coding Round:**
  - Platform – Code Signal
  - Three questions, all based on DSA and coding.
  - Problems were of medium to hard LeetCode Difficulty.
  - Maintain your speed from the beginning of the test, and try simple brute force solutions too. They would pass at least some cases, which is better than none for a given problem, and increase your overall score.
- **Interview – Problem Solving Round:**
  - One DSA based problem was given to be implemented and solved completely. After the satisfactory solution was provided, the question was expanded for a more general case.
  - The round lasts for an hour.
  - Clear up your doubts about the question beforehand from the interviewer. Only after having sound knowledge about the question and its approach, should you start to type in code.
  - Lastly, think loudly during the process in order to get hints.
- **Interview – Project Discussion and Open-ended question round:**
  - I was asked to introduce myself, my skills and my proficiencies. Details about my ongoing project, and the most recently completed project were asked.
  - OOP and DBMS problems were also put forward. Finally, an open-ended question asking to design a Service related to race records was discussed.
  - It is important to be open to accepting your mistakes during the interview if pointed out. Revise OOP and DBMS basic questions beforehand to not stumble.
- **Final Interview – DSA and OOP based code evaluation test:**
  - I was told beforehand on the parameters at which my code would be evaluated upon.
  - During the next one hour, I was asked to implement the game of minesweeper, along with a run() command that could randomly simulate the choices of a human and run the game.
  - The entire problem was not put forward at the start. Instead, I was asked to implement small parts of it, which were extended later. This was done to see how

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expandable my code was at each step.
- Revise your concept of Classes, Constructors, and access specifiers beforehand, as many people only focus on DSA during their preparation.

Sources of Preparation

- **For DSA and coding rounds**: Interview Bit, LeetCode, Aditya Verma YouTube Playlist
- **For OOP and DBMS:** Javatpoint Interview questions for both the subjects, class notes
- **For Interview etiquettes:** Mentoring sessions conducted by PU, and Interview Experiences online.

Courses and Certification

Nothing prominent or great was there in my resume in this field at least. My CGPA could be considered as a plus factor or a visible element in my profile.

Other Relevant Information

Be calm, be composed in front of the interviewer. Think your thoughts loudly, as they want to gauge your thinking process.

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Sector: IT

Name: *Aman Harpavat (2019A8PS0269P)*
Company: Walmart Labs
Profile: Intern

Recruitment Procedure

- Resume shortlisting
- Online test
    - The test had 3 coding questions - 1 easy,1 medium and 1 on the harder side.
    - There was adequate time for all the questions. The questions were based on standard data structures and algorithms.
- There was no interview round for this particular company, shortlisting was based upon test and resume only.

Sources of Preparation

- I did a self-paced course of data structures and algorithms from gfg.The course was really good and provided me a way to practice the things in a structured way.
- After that, I practiced from interviewbit. Most of the questions on the gfg course are available in interviewbit also, so you can just do theory part from gfg and practice from interviewbit also.

Courses and Certification

No courses or certification are required as such if you are preparing for an SDE role. Just keep your DSA concepts strong and keep practicing. The interviewer will also question you upon your skills and projects and won't care much about your certifications in this domain.

Other Relevant Information

- Be confident in your skills. Your mind-set on the day plays a huge role.
- Make your base strong and then do competitive coding too if you find it interesting (codeforces, codechef etc.), it will really help in enhancing your skills.
- Also, before the interviews make sure to give mock interviews on interviewbit or schedule

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some with your seniors, it would help a lot.

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Sector: IT

Name: *Nikul Jain (2019A8PS0412P)*
Company: Walmart
Profile: Software/IT Intern

Recruitment Procedure

- **Online Coding Round (120 mins)**
  - 3 questions were asked.
  - 20 marks for the easy question, 30 for the medium one, and 50 for the hard one.
  - I was able to solve the easy and medium one in 45 mins
  - I spent the rest of the time on the hard one but I wasn't able to solve it but I solved it partially (6/14) test cases passed.
- **Interview**
  - There were no interviews in Walmart.
  - In the Microsoft interview which I faced, I wasn't allowed to compile my code until my interviewer asked me to do so. I have to write the complete code including input and output.
  - They expected me to write the code correctly on the first go, i.e. if you are debugging your code several times, it might affect your selection process.
  - The question was a standard Dynamic Programming question which I think was doable but I had to debug my code several times which might have affected my selection process.
  - You also have to run your own test cases, they won't provide them to you (This was my experience).

Sources of Preparation

- I bought a course on GFG (DSA self-paced) which covers all the important DSA parts asked in an interview and coding rounds. This course took me around 4 months because I was slow. One can easily finish this course in 2 months.
- I solved some questions on Interviewbit too. Almost all the questions covered were from GFG courses but it's a nice way to revise.
- In Interviewbit, don't spend much time on hard questions as they aren't asked much. For the medium questions if you are not able to do the question in 15-20 mins, check the discussion for a solution and mark that question for future reference.
- These 2 sources were enough for me in almost all the coding rounds I faced.

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Other Relevant Information

Never lose hope. I got shortlisted in Microsoft but my interview didn't go well. In many companies' tests, I was quite confident but I wasn't shortlisted and in many companies even after easy questions, I wasn't able to solve them completely but in the end, if you have practiced well, you will get selected, there is no fate, your hard work pays you.

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Sector: IT

Name: *Siddharth Katyal (2019A7PS0066P)*
Company: Walmart
Profile: Software/IT Intern

Recruitment Procedure

- 3 coding questions of total 120 mins
- Easy to hard difficulty
- 2 Math questions, 1 Tree heuristic based question
- Tip – Practicing easy/medium problems on Leetcode/InterviewBit shall suffice.

Sources of Preparation

- InterviewBit
- GeeksforGeeks
- Leetcode
- DSA from college notes/slides and online articles from GFG and IB.

Courses and Certification

Important Subjects – DSA

Other Relevant Information

Don't lose hope, I got shortlisted for 4 day 0 companies, went till the HR rounds of couple, was even confident for some but didn't make it, it's not the end, trust yourself and it'll be fine.

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Sector: IT

Name: *Yash Munjal (2019A7PS0090P)*
Company: Walmart Labs
Profile: Software Development Intern

Recruitment Procedure

- **Process** - Resume Shortlisting, Coding Round.
- **Resume Shortlisting** - Done based on various factors like CGPA(don't know the exact cut-off), and various other projects and work experiences mentioned in the resume.
- **Coding Round** - The test link was sent only to shortlisted candidates. The test was of 2 hours duration and had 3 questions of increasing difficulty.
- **Easy level question** (20 marks) - Based on a simple switch case, but required a slight optimization for all the test cases to work.
- **Medium level question** (30 marks) - The question was quite similar to this - https://codeforces.com/problemset/problem/68/B
- **Hard level question** (50 marks) - The problem was based on adding nodes to a binary tree to make it balanced. It was quite similar to this - https://stackoverflow.com/questions/14391209/finding-the-smallest-number-of-nodes-that-must-be-added-to-make-a-binary-tree-ba
- I was able to solve the first two questions completely and the last question partially.

Sources of Preparation

- GFG for learning the basic syntax and concepts.
- Aditya Verma's Youtube playlist on Dynamic Programming.
- Interview Bit and Leetcode for practicing questions.

Courses and Certification

A good hold over the basics of DSA and a decent amount of practice of Easy to Medium questions on Leetcode would suffice.

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Other Relevant Information

Never ever lose hope! Despite being able to solve most of the problems in the Coding round of many other companies, I was not shortlisted for most of them. Still, a firm belief over my abilities and constant practice of coding questions helped me crack this internship.

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Sector: IT

Name: *Ashutosh Sharma (2018B3A70928P)*
Company: Wells Fargo
Profile: Software Engineer Intern

Recruitment Procedure

- There were three rounds, first was a Computer Based Online Recruitment Test (on AMCAT) followed by 2 rounds of interviews
- **Round 1:** Online Test. There were 3 sections:
  - Verbal Section(10 questions, 15 mins): Easy questions just to test your basic verbal skills like finding grammatical errors, choosing the most appropriate phrases, and passage-based questions.
  - Business Aptitude (14 questions, 25 mins):Based on stocks and basic economics, just to test your logical reasoning and decision making. No prior knowledge of stocks was required as such. Whatever concept used in question was explained there itself.
  - Coding: (2 questions, 1 hour)Both of them were of medium difficulty. One was based on DFS and the other was a classic backtracking question.
- **Round 2:** Technical Interview (45 minutes)
  - This round was held on Zoom. The interviewer introduced himself and then asked me for an introduction.
  - The interviewer then went through my resume and since the majority of my projects were done in Python, he asked me a basic question to code in Python based on some internal library
  - After that I was asked a DSA question involving selective printing of Fibonacci series. Handling all the corner cases and explaining the detailed working was the main part.
  - Then I was asked to explain some basic OOPs concepts with examples.
  - Then I was asked about the differences between some data structures which to use when. And he then gave an example and asked which one I would use.
  - Then he asked me to write a SQL query involving joining 2 tables and filtering rows using 2-3 conditions.
  - Then he gave me a real life example of a problem and asked me how I would model it. I explained how I would implement it using various classes and utilize OOP and DBMS. He was mostly judging the thought process of how a candidate approaches a problem.
  - Then I was asked for details of some of the projects and hackathons I was part of.

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    - Towards the end of the interview he asked me if I had any questions for him. I had already prepared relevant questions beforehand which I asked and then the round was over.
- **Round 3:** Tech Interview II (30 minutes)
    - This round was again held on Zoom. She gave her intro and asked me for a detailed intro and started discussing my resume.
    - Then she picked up one of the projects and a very in-depth discussion went on it.
    - She also asked me some common HR questions like why I want to join Wells Fargo, etc.
    - Towards the end of the interview, she asked me if I had any questions for her. I had already prepared relevant questions beforehand which I asked and then the round was over.

Sources of Preparation

Leetcode, Interviewbit, GFG

Courses and Certification

DSA, OOP, DBMS

Other Relevant Information

Practice questions on all topics from leetcode and interview bit. Also focus on your speed. Start reading GFG archives and Internship Chronicles 1-2 days before the interview. OOP and DBMS are also very important. Prepare HR questions well in advance.

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Sector: IT

Name: *Atharva Chandak (2019A7PS0062P)*
Company: Wells Fargo
Profile: SDE

Recruitment Procedure

- Online Test , 2 rounds of Technical Interviews
- Online Coding Test had 3 sections:
    - *Verbal Section (15 mins)*: 12 questions to test your basic verbal skills testing basic grammar, and comprehension based questions.
    - *Financial Aptitude (25 mins)*: ~15 questions based on basic economics/finance to test your logical reasoning. No prior knowledge of finance was expected. However, time was a very constraining factor for this section.
    - *Coding (45 mins)*: There were 2 DSA based coding questions. They were fairly simple and straightforward.
- **Technical Interviews:** There were 2 Technical Rounds with elimination in each round
- **Round 1 (~ 45 mins):**
    - Basic introduction followed by a deep discussion on projects or internships done before. He was interested in my projects in all domains - Deep Learning, Web development, and Robotics projects. So don't make the mistake of just being proficient in the development based projects in an SDE interview. Know about all that you mention.
    - Short answer questions from OOP & DSA (as I had mentioned I had previously done these courses in past semesters). Questions were theoretical and fairly straightforward from basic OOP and Graphs/Tree based algorithms.
    - A simple DSA question to code on notepad. He asked me it's time and space complexities.
- **Round 2 (~ 40 mins):**
    - This round was again resume centric with discussions on how my projects could be generalized and extended for other applications including Finance.
    - Typical HR questions.

Sources of Preparation

GeeksForGeeks & InterviewBit

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Courses and Certification

DSA, OOP, ML (external), Deep Learning (external)

Other Relevant Information

- Be sure to know about your resume in and out, especially the projects you mention. In my case, both my interviews were resume centric & I was asked a lot of questions on my past projects. It would also be good if you know about how your project could be generalized for some other applications as well.
- Also, in general, at the end of each interview, the interviewer gives us a chance to ask questions if we have any. For this, do some background research on the company and ask relevant questions.
- These questions could also be personalized to the interviewer as they usually also introduce themselves at the start. This might give you an edge if you are able to strike a good conversation with the interviewer (it did help me in mine).

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Sector: IT

Name: *Dhairya Rikul Shah (2019A7PS0048P)*
Company: Wells Fargo
Profile: Software Development Engineer Intern

Recruitment Procedure

- The recruitment procedure: Online Test, 2 Technical Rounds
- **Online Test** was conducted on the AMCAT platform. There was no negative marking. It had 3 sections:
    - **Verbal Section**: 10 questions to test basic verbal skills like finding grammatical errors, choosing the most appropriate phases, and passage-based questions. 15 mins were allotted for this section and free navigation among questions was not allowed. Questions were reasonably straightforward.
    - **Business Aptitude**: 14 questions based on stocks and basic economics to test logical reasoning. No prior knowledge of stocks or markets was required. 25 minutes were allotted for this section and free navigation among questions was not allowed in this section as well.
    - **Coding**: There were 2 coding questions. The questions were different for everyone. The compiler doesn't support any of the libraries and must use basic-level implementations. The summary of the questions is as follows:
        - Given an array of n integers. You are allowed to do only "merge" operations, i.e., merge two adjacent elements. The task is to make the array a Palindrome of the largest size possible.
        - This question was based on the merge intervals. N buses were given with their starting and ending stations (The stations were in order of their numbers on one road) and you had to replace all the buses whose routed overlapped with one bus and find the number of buses removed in this process.
- **Technical Interview 1:**
    - This round was held on Zoom. It lasted for about 40-45 mins. The interviewer first asked me to introduce myself.
    - Then she asked some questions from OOP like the difference between encapsulation and abstraction, inheritance, etc. Then she asked some basic puzzles like cutting a cake into 8 pieces by 3 cuts and filling a bucket with some amount of water using jugs of a fixed amount.
    - Then she asked me to open my IDE and solve the question: Remove duplicate nodes from a sorted linked list.

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- Try to think out loud while solving the question, only then the interviewer will be able to give proper hints about where you are going wrong.
- At last, she asked if I had questions. Make sure you ask questions that show your interest in the company and be prepared with questions before the interview.

- **Technical Interview 2:**
  - This round was also held on Zoom. It lasted for about 35 mins. The interviewer asked me to explain the projects I had mentioned in my resume and we had a detailed discussion on each project.
  - Then he went through my resume and asked me questions based on each of the subjects, technical skills I had mentioned in my resume including DBMS and OOP and the questions were pretty detailed. So, make sure you are thorough with all the things you have mentioned in your resume.
  - This round also ended with the interviewer asking me if I had questions. Again, make sure you ask good questions that show your interest in the company.

Sources of Preparation

- GeeksForGeeks
- InterviewBit
- LeetCode
- Codeforces

Courses and Certification

Courses to be focused on: DSA, OOP, DBMS

Other Relevant Information

- Have a good grasp of DSA, OOP, DBMS, and everything you have mentioned in your resume.
- During the interview, make sure to clarify the question asked as there may be some edge cases deliberately left open ended to see how you interpret them.
- Make sure you also see the GeeksForGeeks Archives for interview experiences. Make a habit of doing questions in a given amount of time.
- Communication is the key in the interviews and speak up your mind so that the interviewer gets to know you well.

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Sector: IT

Name: *Lakshay Sharma (2018B3A70803P)*
Company: Wells Fargo
Profile: Software Engineer Intern

Recruitment Procedure

- Round 1(Online test 1 hr 40 mins): Conducted on Aspiring Minds AMCAT platform. There were 3 sections:
  - Verbal Reasoning: It had questions like fill in the blanks with the correct word, choose a better option to replace the highlighted phrase with and questions based on paragraphs. We had 15 mins to solve 10 questions.
  - Business Analytics: This section had questions where graphs, stocks, the performance of a company, etc were given and we were supposed to answer by analyzing those. This section had 14 questions to be solved in 25 mins.
  - Coding: There were 2 questions to be solved in 1 hr. Everyone had different questions.
    - The first question was related to finding the minimum number of vertices to parameterize a given set of points.
    - Second question was easy, based on outputting answers to a given stream of queries based on some given constraints (had to be solved using min heap and dynamic arrays).
- Interview: The preparation of technical rounds majorly involved revision of standard algorithms, the practice of company-specific questions from GFG and reading interview experiences of the company from GFG.
- Round 2 (Technical Interview): The interview was held on Zoom The majority of the interview consisted of Resume and project discussion (They go deep into the project if you have mentioned ML). I was asked about many ML algorithms, their basic idea and why I chose the algorithms over others. Some simple algorithmic problems (implementation of the code was not asked). And many theory questions on OOPs concepts and DBMS.
- Round 3 (Managerial Interview): The interview was again held on Zoom. It again started with a thorough discussion over my resume (mostly centered around Machine Learning). This round didn't consist of any technical questions, rather some situational interview questions were asked, like what are my views on digital currency and how it would impact the world in future, second he asked me to build an expense prediction tool for my family. The interview concluded with some general HR questions like how I want to intern at Wells Fargo etc.

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Sources of Preparation

- Geeks for geeks (regularly read articles on GFG)
- Leetcode
- InterviewBit
- Book: Cracking the coding interview

Courses and Certification

- Data Structures and Algorithms
- Object Oriented Programming
- Database Management

Other Relevant Information

- Practice as many DSA problems as possible
- CGPA matters even if everybody says it doesn't. Try to maintain a decent CGPA.
- Stay calm and try to answer their questions completely.
- Go through the resume properly. Make sure you can explain each and every word written in there.
- Revise OOP and DBMS concepts as well, as many applicants tend to ignore these topics.
- Think out loud during the interviews. While writing the code, try to explain every line of your code at the same time to the interviewer.

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Sector: IT

Name: *Raghav Mishra (2018B3A70801P)*
Company: Wells Fargo
Profile: SDE

Recruitment Procedure

- Resume Shortlisting, Online Test, 2 Technical Interview
- Online Test had 3 sections:
    - **Verbal:** It had 15 questions to test your basic verbal skills like finding grammatical errors, choosing the most appropriate phrases, and passage-based questions. The time allotted was 20 minutes.
    - **Business Aptitude**: 15 questions based on solving basic business-related aptitude questions based on stocks selling, discount on airline tickets etc. It was to test your logical reasoning and decision making. No prior knowledge of stocks was required as such. 25 mins were given.
    - **Coding**: There were 2 coding questions, one was easy and the other was of medium difficulty.
- The test was easy. However, it is important to maintain speed to finish all questions.
- There were 2 technical rounds:
    - **Round 1**: It was a 40-minute interview. She started by introducing herself and asked me to do the same. After that she discussed a few things about my PS1 project and other projects.
    - Then she asked me a few basic conceptual DSA questions like the difference between Stack and Ques, where to use them, explain how merge sort works with its time complexity etc.
    - Then she asked me a coding question for which I had to share my screen. It was an easy question where I had to find the most occurring Integer in the given array.
    - After that she came to OOP, she again asked me basic conceptual questions like what is abstraction, polymorphism etc. (Make sure you have a strong grasp of these concepts and can explain them).
    - She then asked me about what deadlock is and since I didn't revise multithreading I politely said the same to her and she said it was okay (Make sure you convey what you don't know rather than throwing your hand in trying to attempt that)
    - She then asked me how I would design an application that works like Spotify, in a sense how would I use Data structures for the same. I explained to her my approach with time and space complexity. She was satisfied and the interview ended.

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- **Round 2**:
  - It was a 30-minute interview. This round was completely focused on discussing my Resume. He initially focused on my projects asking details of it and what was my contribution to it.
  - Then he went on to my certifications, asking about their relevance and how did I get them and what did I learn while doing those courses (this was specific to my course certificate).
  - He then asked me if I had published any research paper and then discussed more on it.
  - At the end he asked if I had any questions for him which I did so I asked him a few questions related to work culture etc (prepare some questions beforehand).

Sources of Preparation

- Course Material of OOP, DSA, DBMS
- Problem solving on Leetcode and Interviewbit

Courses and Certification

DSA, OOP, DBMS, ML (if you have done projects)

Other Relevant Information

- Do go through your resume and be prepared for cross-questions, make sure you have enough knowledge of the domain in which you have done the project.
- During the interview don't go directly into answering the question, take your time to understand each aspect of the question then articulate your answer accordingly.
- For coding questions, make sure you understand the question completely (don't forget the corner cases) and start with explaining your approach to the interviewer before you start coding.
- It is important to let the interviewer know your approach. Don't be silent. Speak your mind, explain your approach and then code. I was guided in one question where I was going wrong and was given a vague clue that I caught while talking.
- Look at the past interview experiences of the particular company on geeksforgeeks before the screening test and before interview rounds and prepare accordingly. Looking at some experiences you will understand the pattern of interviews of each company, and this might prove to be very critical for last day preparations of the interviews.

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- Learn something about the company and what they do beforehand, it would show them how interested and enthusiastic you are, which always is a positive.
- Interviews are about your own confidence in your knowledge and assert the same on the interviewer.

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Domain:

MECHANICAL

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Sector: Mechanical/Manufacturing

Name: *Shaurya Banerjee (2019ABPS1056P)*
Company: Bajaj Auto
Profile: Graduate Trainee Engineer (R&D/Operations)

Recruitment Procedure

- **4 Stages:** Aptitude & Technical Test, Psychometric Test, Technical Interview, HR Interview with elimination after every stage.
- **Aptitude & Technical Test** had a total of 90 questions, to be solved in 90 minutes. Each correct answer carried 1 mark, with a 0.25 negative mark for every wrong answer. The test had 4 sections, which included:
    - **Verbal Ability**: 8 questions to test basic verbal skills like choosing the most appropriate phases/word for sentences and passage-based questions. Questions were fairly easy.
    - **Aptitude**: 12 questions based on logical reasoning.
    - **Quantitative Ability**: There were 25 questions based on basic Class 10 arithmetic.
    - **Technical Ability**: 45 questions based on core topics of Mechanical and Manufacturing Engineering. This was the toughest section of the question paper.
- **Psychometric Test** – The test involved 100 objective questions based on how I would
- respond to certain situations/options. There was no time limit, however, navigation
- between questions was not allowed.
- **Technical Interview** –
    - The interview lasted 20 minutes and was quite intense with questions focussing on core subjects and projects done by me.
    - The interview revolved around the understanding of areas such as Lean Manufacturing, Operations Management, Casting, Forming & Welding and IC Engines and their real-life applications.
- **HR Interview** –
    - This interview lasted for roughly 25 minutes. It started with personal questions revolving around my interests, the courses I had completed in college, how much I know about Bajaj Auto, my plans for the next 5 years and my POR experience outside the BITS campus (i.e., specifically not the college club PORs).
    - They also wanted to know my hands-on experience with manufacturing processes.
    - Situational questions were asked about whether/how I would be able to communicate with both the Top Management, as well as with the Operators on the Shop Floor.

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Sources of Preparation

- Basic level of practice on quantitative ability, logical reasoning, verbal ability and aptitude questions.
- Going through GATE questions on Core Mechanical topics would also help.
- Most importantly, one should be very thorough with:
    - The details of the projects/internships done by them,
    - All that has been written in the CV
    - The info available in public domain about the Company (Bajaj Auto)

Courses and Certification

- Thorough understanding of Core Courses such as, in my case they were: Lean Manufacturing, Operations Management, Casting Forming & Welding.
- Questions on IC Engines were also asked even though I had not completed a course on the same.

Other Relevant Information

- The interviewer in the HR round probed, directly & indirectly, whether my interest in core area is genuine, whether I would shift to MBA or to the SDE domain and why would I want to join Bajaj Auto.
- The interviewer might also try to throw you off guard to test the consistency of your statements and to check how you would respond in stress situations. Hence, it is very important to be confident, realistic and convincing with your answers and plans.

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Sector: Mechanical

Name: *Yuvam Kulkarni (2019A4PS0171P)*
Company: Hindustan Unilever Limited (HUL)
Profile: Supply Chain Intern

Recruitment Procedure

- **Google Form Shortlisting**:
  - An introductory session by HUL was held where details regarding the program (ULIP) were discussed and the roles for which they were hiring.
  - A google form from the company was floated which basically had basic personal details and questions to open ended questions about your academic and extracurricular history – all of them were answered with points relevant and similar to those in the verified superset resume.
  - The form was to be filled carefully and with accurate information as it was used for questioning during the interview.
- **Automated Interview**:
  - As the name describes, an automated interview link was shared through an email to the candidates shortlisted in the previous round. A time frame of 3 days was given to take the interview, as per your convenience.
  - The interview itself was quite short, around 15-20 mins consisting of questions based on case studies relating to the role here- supply chain. A reading and preparation time of 1 min was followed by an answering window of 5 minutes which was recorded as your answers to those Three case questions.
  - The key here is to structure your thoughts well before speaking, be confident while answering and have some clarity in your idea, they don't expect you to read and solve a case in 1 minute.
- **Resume Shortlisting**: One of the key features of HUL hiring, is the resume shortlisting step. A resume with strong Academics (GPA) + Projects (in your major)+some management experience is a strong case for them.
- **Interview**:
  - Unlike the automated interview, the final round of the interview was conducted by a team of HUL in real time, with candidates called in slots of 25-30 mins each.
  - The interview comprises both technical and HR related questions. There was only one round of the interview and everyone was asked different domains and types of questions- the more common one's being your projects written in your resume, questions on subjects you've mentioned on your resume.
  - The main point here is to be thorough with your resume to explain everything in

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detail you've written because they will question you even on the slightest details of your work – projects in my case, and to have at least two well prepared CDCs that you've mentioned in your resume.

Sources of Preparation

Prepare at least 2 CDCs well for your interview (with fluid mechanics being one of them if you're in Mech), read your project reports and don't mention supply chain unless you're extremely confident with the concepts (they don't expect you to know supply chain).

Other Relevant Information

A strong GPA and core resume with some extracurricular activities increases your chances for getting selected, these not being the sole criteria here. Be thorough with what you've written on the resume because they'll question you on what you've given them in the resume, explain any small detail and do not list subjects/work of which you're unsure of on the resume.

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Sector: Mechanical

Name: *Ishu Kumar (2019A4PS0495P)*
Company: JSW Steel Ltd
Profile: Core Engineering Intern

Recruitment Procedure

- Online Test, GD, HR Interview
- Test was conducted on AMCAT platform and had 3 sections:
    - English based – Vocabulary, antonyms/synonyms, comprehensive questions, etc.
    - Mental Ability Test – Basic MAT questions
    - Technical Part – Questions specific to the discipline (in my case mechanical)
- In the test, most scoring parts were English comprehensive, full MAT part, and technical part questions. In technical (for mech), more questions were asked on Applied Thermodynamics, Material Science, etc.
- All the 3 sections were timed. Speed is critical.
- GD was conducted in two groups – first group for Chemical + Civil, and second group for Mechanical + Manufacturing.
- GD was of approx. 30 minutes, with two GDs of 15 min each. 2 members were on the Panel with 1 mediator. For each GD, 2 topics were given and the students had to decide to proceed with GD on any one of them.
- Topics of GD were related to – Online mode of teaching, Impact of EVs on Automobile Industry, Situation in Coal Mining Industry, etc.
- The HR interview was very easy going. Questions were asked about – family, what each family member is doing, your future goals, your take on higher education, mobility issues, what you know about the company/group, what experience are you expecting from internship, etc.

Sources of Preparation

- Online Test – Preparation for English based part is not very certain. Preparation for MAT can be easily done through mock questions/tests available online. Preparation for the Technical Test can be best done through college course notes and slides.
- GD – Best to be vocal about your ideas in general. Building up good communication skills (both speaking and listening) over time will help. Take part in mock GDs, or enroll in courses like Soft Skills for Professionals.
- HR Interview – Read about the company in detail. Best to not have any mobility issues.

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Be confident, humble and polite.
- Dress formally for both GD and HR Interview.

Courses and Certification

Important curriculum courses (for Mechanical) are – Applied Thermodynamics, Material Science & Engineering, Heat Transfer, etc. No other certification/course is essential.

Other Relevant Information

- The most important part is to clear the Online Test, since only around 13 people were shortlisted for the next round, i.e., GD.
- Be very much vocal in GD, but put relevant points only. Listen very carefully to the topic (since it is emphasized and spoken twice) and do not deviate much from it.

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Sector: Mechanical.

Name: *Tapasvi Bhatt (2018B2A40958P)*
Company: JSW Steel
Profile: Summer intern

Recruitment Procedure

- Resume shortlisting: Mostly all the people with core profiles were able to clear this round.
- AMCAT + Mechanical Quiz: AMCAT can be prepared from various online sources + a sound problem solving knowledge of Mechanical core courses is required.
- Group Discussion: General Topics. Good oratory skills are helpful here.
- HR interview

Sources of Preparation

Core courses in BITS.

Other Relevant Information

Resume should speak out loud that you are into Core Jobs.

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Sector: Mechanical

Name: *Lavitra Kumar Garg (2019A4PS0482P)*
Company: TATA Steel
Profile: Management Trainee

Recruitment Procedure

- Online Test, GD, Technical Interview
- The test had 4 sections:
    - English Ability
    - Quantitative Ability
    - Logical Reasoning
    - Technical Questions
- There was no negative marking and the questions were very straightforward. Revisit second-year mech courses. Questions were mainly theoretical and minimum numerical were asked.
- GD was a routine procedure. There were 6 people in each group and the topic of my GD was "Role of Mechanical Engineering in the world of automation and electrical engineering."
- For the technical interview, I was asked to draw the Iron-Carbon phase diagram and some questions from the mechanics of solids.

Sources of Preparation

Second Year Course Notes and Books

Courses and Certification

Material Science and Engineering, Mechanics of Solids, Design of Machine Elements, Applied Thermodynamics

Other Relevant Information

The technical interview can be very tricky. Always explain your thought process while answering any question and mention basic concepts that were part of your reasoning. If you don't know something, mention it straight away, the interviewer is generally chill about it.

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Sector: Mechanical

Name: *Somya Tripathi (2019A4PS0474P)*
Company: TATA Steel
Profile: Mechanical Engineering Intern

Recruitment Procedure

- There was a written round consisting of Mental Ability (MAT), Maths and 20 technical questions on the basics of mechanical engineering.
- This was followed by a GD of about 7 people in two groups and finally the interview.

Sources of Preparation

Understanding of second year mechanical engineering courses is enough.

Courses and Certification

Applied Thermodynamics, Mechanics of Solids, Fluid Dynamics, Material Science and Manufacturing processes.

Other Relevant Information

- The written test was relatively easy except the MAT part.
- During the GD, focus on presenting your thoughts in a coherent manner.
- My interview started with me telling the interviewer about myself followed by technical questions.
- You don't need to answer every technical question correctly. Just be truthful in the interview and approach the questions in a logical manner.

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Sector: Mechanical

Name: *Vedant Jasu (2019A4PS0320P)*
Company: Tata Steel (INSPIRE Summer Internship)
Profile: Engineering- Core

Recruitment Procedure

- Resume Shortlisting, Online Test, GD, PI
- Test had 4 sections:
  - English- comprehension, sentence correction, antonym/synonym
  - Logical Reasoning- similar to those asked in BITSAT
  - Mathematics- basic school level mathematics based on 11^{th}/12^{th}
  - Mechanical- based on Mechanics of Solids, Fluid Dynamics, Heat Transfer
- Test was easy. However, it is important to maintain speed to finish all questions. Going back to previous questions was not allowed.
- GD topic: Role and need of mechanical engineers in Industry 4.0
- Questions asked in PI:
  - Tell us about yourself (brief introduction)
  - Questions asked from various courses, based on what courses have you written on your resume
  - Advanced questions asked from Design of Machine Elements and Engines, Motors and Mobility

Sources of Preparation

Be clear about 2^{nd} year and ongoing 3^{rd} year mechanical CDCs, especially the ones mentioned in the resume. Deeper understanding into a few concepts would also help. GD practice can be done by searching different topics and trying to get as many points as you can, to speak on them.

Courses and Certification

Fluid Dynamics, Engines Motors and Mobility, Mechanics of Solids, Design of Machine Elements, Material Science would help a lot for the test and PI.

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Other Relevant Information

Apart from core knowledge, be confident about whatever you know. You will not know everything in the interview, so answer whatever you know confidently and move on from what you do not know. Try to speak quality things in the GD, and don't keep speaking all the time if you do not have good points.

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