The Amazon Interview

Amazon's recruiting process typically begins with a phone screen in which a candidate interviews with a specific team. A small portion of the time, a candidate may have two or more interviews, which can indicate either that one of their interviewers wasn't convinced or that they are being considered for a different team or profile. In more unusual cases, such as when a candidate is local or has recently interviewed for a different position, a candidate may only do one phone screen.

The engineer who interviews you will usually ask you to write simple code via a shared document editor. They will also often ask a broad set of questions to explore what areas of technology you're familiar with.

Next, you fly to Seattle (or whichever office you're interviewing for) for four or five interviews with one or two teams that have selected you based on your resume and phone interviews. You will have to code on a whiteboard, and some interviewers will stress other skills. Interviewers are each assigned a specific area to probe and may seem very different from each other. They cannot see the other feedback until they have submitted their own, and they are discouraged from discussing it until the hiring meeting.

The "bar raiser" interviewer is charged with keeping the interview bar high. They attend special training and will interview candidates outside their group in order to balance out the group itself. If one interview seems significantly harder and different, that's most likely the bar raiser. This person has both significant experience with interviews and veto power in the hiring decision. Remember, though: just because you seem to be struggling more in this interview doesn't mean you're actually doing worse. Your performance is judged relative to other candidates; it's not evaluated on a simple "percent correct" basis.

Once your interviewers have entered their feedback, they will meet to discuss it. They will be the people making the hiring decision.

While Amazon's recruiters are usually excellent at following up with candidates, occasionally there are delays. If you haven't heard from Amazon within a week, we recommend a friendly email.

Definitely Prepare:

Amazon cares a lot about scale. Make sure you prepare for scalability questions. You don't need a background in distributed systems to answer these questions. See our recommendations in the System Design and Scalability chapter.

Additionally, Amazon tends to ask a lot of questions about object-oriented design. Check out the Object-Oriented Design chapter for sample questions and suggestions.

What's Unique:

The Bar Raiser is brought in from a different team to keep the bar high. You need to impress both this person and the hiring manager.

Amazon tends to experiment more with its hiring process than other companies do. The process described here is the typical experience, but due to Amazon's experimentation, it's not necessarily universal.

The Google Interview

There are many scary rumors floating around about Google interviews, but they're mostly just that: rumors. The interview is not terribly different from Microsoft's or Amazon's.

A Google engineer performs the first phone screen, so expect tough technical questions. These questions may involve coding, sometimes via a shared document. Candidates are typically held to the same standard and are asked similar questions on phone screens as in on-site interviews.

On your on-site interview, you'll interview with four to six people, one of whom will be a lunch interviewer. Interviewer feedback is kept confidential from the other interviewers, so you can be assured that you enter each interview with blank slate. Your lunch interviewer doesn't submit feedback, so this is a great opportunity to ask honest questions.

Interviewers are typically not given specific focuses, and there is no "structure" or "system" as to what you're asked when. Each interviewer can conduct the interview however she would like.

Written feedback is submitted to a hiring committee (HC) of engineers and managers to make a hire / no-hire recommendation. Feedback is typically broken down into four categories (Analytical Ability, Coding, Experience, and Communication) and you are given an overall score from 1.0 to 4.0. The HC usually does not include any of your interviewers. If it does, it was purely by random chance.

To extend an offer, the HC wants to see at least one interviewer who is an "enthusiastic endorser." In other words, a packet with scores of 3.6, 3.1, 3.1 and 2.6 is better than all 3.1s.

You do not necessarily need to excel in every interview, and your phone screen performance is usually not a strong factor in the final decision.

If the hiring committee recommends an offer, your packet will go to a compensation committee and then to the executive management committee. Returning a decision can take several weeks because there are so many stages and committees.

Definitely Prepare:

As a web-based company, Google cares about how to design a scalable system. So, make sure you prepare for questions from System Design and Scalability.

Google puts a strong focus on analytical (algorithm) skills, regardless of experience. You should be very well prepared for these questions, even if you think your prior experience should count for more.

What's Different:

Your interviewers do not make the hiring decision. Rather, they enter feedback which is passed to a hiring committee. The hiring committee recommends a decision which can be—though rarely is—rejected by Google executives.

▸ The Apple Interview

Much like the company itself, Apple's interview process has minimal bureaucracy. The interviewers will be looking for excellent technical skills, but a passion for the position and the company is also very important. While it's not a prerequisite to be a Mac user, you should at least be familiar with the system.

The interview process usually begins with a recruiter phone screen to get a basic sense of your skills, followed up by a series of technical phone screens with team members.

Once you're invited on campus, you'll typically be greeted by the recruiter who provides an overview of the process. You will then have 6-8 interviews with members of the team with which you're interviewing, as well as key people with whom your team works.

You can expect a mix of one-on-one and two-on-one interviews. Be ready to code on a whiteboard and make sure all of your thoughts are clearly communicated. Lunch is with your potential future manager and appears more casual, but it is still an interview. Each interviewer usually focuses on a different area and is discouraged from sharing feedback with other interviewers unless there's something they want subsequent interviewers to drill into.

Towards the end of the day, your interviewers will compare notes. If everyone still feels you're a viable candidate, you will have an interview with the director and the VP of the organization to which you're applying. While this decision is rather informal, it's a very good sign if you make it. This decision also happens behind the scenes, and if you don't pass, you'll simply be escorted out of the building without ever having been the wiser (until now).

If you made it to the director and VP interviews, all of your interviewers will gather in a conference room to give an official thumbs up or thumbs down. The VP typically won't be present but can still veto the hire if they weren't impressed. Your recruiter will usually follow up a few days later, but feel free to ping him or her for updates.

Definitely Prepare:

If you know what team you're interviewing with, make sure you read up on that product. What do you like about it? What would you improve? Offering specific recommendations can show your passion for the job.

What's Unique:

Apple does two-on-one interviews often, but don't get stressed out about them–it's the same as a one-on-one interview!

Also, Apple employees are huge Apple fans. You should show this same passion in your interview.

The Facebook Interview

Once selected for an interview, candidates will generally do one or two phone screens. Phone screens will be technical and will involve coding, usually an online document editor.

After the phone interview(s), you might be asked to do a homework assignment that will include a mix of coding and algorithms. Pay attention to your coding style here. If you've never worked in an environment which had thorough code reviews, it may be a good idea to get someone who has to review your code.

During your on-site interview, you will interview primarily with other software engineers, but hiring managers are also involved whenever they are available. All interviewers have gone through comprehensive interview training, and who you interview with has no bearing on your odds of getting an offer.

Each interviewer is given a "role" during the on-site interviews, which helps ensure that there are no repetitive questions and that they get a holistic picture of a candidate. These roles are:

- Behavioral ("Jedi"): This interview assesses your ability to be successful in Facebook's environment. Would you fit well with the culture and values? What are you excited about? How do you tackle challenges? Be prepared to talk about your interest in Facebook as well. Facebook wants passionate people. You might also be asked some coding questions in this interview.
- Coding and Algorithms ("Ninja"): These are your standard coding and algorithms questions, much like what you'll find in this book. These questions are designed to be challenging. You can use any programming language you want.

- Design/Architecture ("Pirate"): For a backend software engineer, you might be asked system design questions. Front-end or other specialties will be asked design questions related to that discipline. You should openly discuss different solutions and their tradeoffs.

You can typically expect two "ninja" interviews and one "jedi" interview. Experienced candidates will also usually get a "pirate" interview.

After your interview, interviewers submit written feedback, prior to discussing your performance with each other. This ensures that your performance in one interview will not bias another interviewer's feedback.

Once everyone's feedback is submitted, your interviewing team and a hiring manager get together to collaborate on a final decision. They come to a consensus decision and submit a final hire recommendation to the hiring committee.

Definitely Prepare:

The youngest of the "elite" tech companies, Facebook wants developers with an entrepreneurial spirit. In your interviews, you should show that you love to build stuff fast.

They want to know you can hack together an elegant and scalable solution using any language of choice. Knowing PHP is not especially important, particularly given that Facebook also does a lot of backend work in C++, Python, Erlang, and other languages.

What's Unique:

Facebook interviews developers for the company "in general," not for a specific team. If you are hired, you will go through a six-week "bootcamp" which will help ramp you up in the massive code base. You'll get mentorship from senior devs, learn best practices, and, ultimately, get a greater flexibility in choosing a project than if you were assigned to a project in your interview.

The Palantir Interview

Unlike some companies which do "pooled" interviews (where you interview with the company as a whole, not with a specific team), Palantir interviews for a specific team. Occasionally, your application might be re-routed to another team where there is a better fit.

The Palantir interview process typically starts with two phone interviews. These interviews are about 30 to 45 minutes and will be primarily technical. Expect to cover a bit about your prior experience, with a heavy focus on algorithm questions.

You might also be sent a HackerRank coding assessment, which will evaluate your ability to write optimal algorithms and correct code. Less experienced candidates, such as those in college, are particularly likely to get such a test.

After this, successful candidates are invited to campus and will interview with up to five people. Onsite interviews cover your prior experience, relevant domain knowledge, data structures and algorithms, and design.

You may also likely get a demo of Palantir's products. Ask good questions and demonstrate your passion for the company.

After the interview, the interviewers meet to discuss your feedback with the hiring manager.

Definitely Prepare:

Palantir values hiring brilliant engineers. Many candidates report that Palantir's questions were harder than those they saw at Google and other top companies. This doesn't necessarily mean it's harder to get an offer (although it certainly can); it just means interviewers prefer more challenging questions. If you're interviewing with Palantir, you should learn your core data structures and algorithms inside and out. Then, focus on preparing with the hardest algorithm questions.

Brush up on system design too if you're interviewing for a backend role. This is an important part of the process.

What's Unique:

A coding challenge is a common part of Palantir's process. Although you'll be at your computer and can look up material as needed, don't walk into this unprepared. The questions can be extremely challenging and the efficiency of your algorithm will be evaluated. Thorough interview preparation will help you here. You can also practice coding challenges online at HackerRank.com.

III

Special Situations

There are many paths that lead someone to this book. Perhaps you have more experience but have never done this sort of interview. Perhaps you're a tester or a PM. Or perhaps you're actually using this book to teach yourself how to interview better. Here's a little something for all these "special situations."

Experienced Candidates

Some people assume that the algorithm-style questions you see in this book are only for recent grads. That's not entirely true.

More experienced engineers might see slightly less focus on algorithm questions—but only slightly

If a company asks algorithm questions to inexperienced candidates, they tend to ask them to experienced candidates too. Rightly or wrongly, they feel that the skills demonstrated in these questions are important for all developers.

Some interviewers might hold experience candidates to a somewhat lower standard. After all, it's been years since these candidates took an algorithms class. They're out of practice.

Others though hold experienced candidates to a higher standard, reasoning that the more years of experience allow a candidate to have seen many more types of problems.

On average, it balances out.

The exception to this rule is system design and architecture questions, as well as questions about your resume. Typically, students don't study much system architecture, so experience with such challenges would only come professionally. Your performance in such interview questions would be evaluated with respect to your experience level. However, students and recent graduates are still asked these questions and should be prepared to solve them as well as they can.

Additionally, experienced candidates will be expected to give a more in-depth, impressive response to questions like, "What was the hardest bug you've faced?" You have more experience, and your response to these questions should show it.

Testers and SDETs

SDETs (software design engineers in test) write code, but to test features instead of build features. As such, they have to be great coders and great testers. Double the prep work!

If you're applying for an SDET role, take the following approach:

- *Prepare the Core Testing Problems:* For example, how would you test a light bulb? A pen? A cash register? Microsoft Word? The Testing chapter will give you more background on these problems.
- *Practice the Coding Questions:* The number one thing that SDETs get rejected for is coding skills. Although coding standards are typically lower for an SDET than for a traditional developer, SDETs are still expected to be very strong in coding and algorithms. Make sure that you practice solving all the same coding and algorithm questions that a regular developer would get.
- *Practice Testing the Coding Questions:* A very popular format for SDET questions is "Write code to do X," followed up by, "Okay, now test it." Even when the question doesn't specifically require this, you should ask yourself, "How would I test this?" Remember: any problem can be an SDET problem!

Strong communication skills can also be very important for testers, since your job requires you to work with so many different people. Do not neglect the Behavioral Questions section.

Career Advice

Finally, a word of career advice: If, like many candidates, you are hoping to apply to an SDET position as the "easy" way into a company, be aware that many candidates find it very difficult to move from an SDET position to a dev position. Make sure to keep your coding and algorithms skills very sharp if you hope to make this move, and try to switch within one to two years. Otherwise, you might find it very difficult to be taken seriously in a dev interview.

Never let your coding skills atrophy.

▸ Product (and Program) Management

These "PM" roles vary wildly across companies and even within a company. At Microsoft, for instance, some PMs may be essentially customer evangelists, working in a customer-facing role that borders on marketing. Across campus though, other PMs may spend much of their day coding. The latter type of PMs would likely be tested on coding, since this is an important part of their job function.

Generally speaking, interviewers for PM positions are looking for candidates to demonstrate skills in the following areas:

- *Handling Ambiguity:* This is typically not the most critical area for an interview, but you should be aware that interviewers do look for skill here. Interviewers want to see that, when faced with an ambiguous situation, you don't get overwhelmed and stall. They want to see you tackle the problem head on: seeking new information, prioritizing the most important parts, and solving the problem in a structured way. This typically will not be tested directly (though it can be), but it may be one of many things the interviewer is looking for in a problem.
- *Customer Focus (Attitude):* Interviewers want to see that your attitude is customer-focused. Do you assume that everyone will use the product just like you do? Or are you the type of person who puts himself in the customer's shoes and tries to understand how they want to use the product? Questions like "Design an alarm clock for the blind" are ripe for examining this aspect. When you hear a question like this, be sure to ask a lot of questions to understand *who* the customer is and *how* they are using the product. The skills covered in the Testing section are closely related to this.
- *Customer Focus (Technical Skills):* Some teams with more complex products need to ensure that their PMs walk in with a strong understanding of the product, as it would be difficult to acquire this knowledge on the job. Deep technical knowledge of mobile phones is probably not necessary to work on the Android or Windows Phone teams (although it might still be nice to have), whereas an understanding of security might be necessary to work on Windows Security. Hopefully, you wouldn't interview with a team that

required specific technical skills unless you at least claim to possess the requisite skills.

- *Multi-Level Communication:* PMs need to be able to communicate with people at all levels in the company, across many positions and ranges of technical skills. Your interviewer will want to see that you possess this flexibility in your communication. This is often examined directly, through a question such as, "Explain TCP/IP to your grandmother." Your communication skills may also be assessed by how you discuss your prior projects.
- *Passion for Technology:* Happy employees are productive employees, so a company wants to make sure that you'll enjoy the job and be excited about your work. A passion for technology—and, ideally, the company or team—should come across in your answers. You may be asked a question directly like, "Why are you interested in Microsoft?" Additionally, your interviewers will look for enthusiasm in how you discuss your prior experience and how you discuss the team's challenges. They want to see that you will be eager to face the job's challenges.
- *Teamwork / Leadership:* This may be the most important aspect of the interview, and—not surprisingly—the job itself. All interviewers will be looking for your ability to work well with other people. Most commonly, this is assessed with questions like, "Tell me about a time when a teammate wasn't pulling his / her own weight." Your interviewer is looking to see that you handle conflicts well, that you take initiative, that you understand people, and that people like working with you. Your work preparing for behavioral questions will be extremely important here.

All of the above areas are important skills for PMs to master and are therefore key focus areas of the interview. The weighting of each of these areas will roughly match the importance that the area holds in the actual job.

Dev Lead and Managers

Strong coding skills are almost always required for dev lead positions and often for management positions as well. If you'll be coding on the job, make sure to be very strong with coding and algorithms—just like a dev would be. Google, in particular, holds managers to high standards when it comes to coding.

In addition, prepare to be examined for skills in the following areas:

- *Teamwork / Leadership:* Anyone in a management-like role needs to be able to both lead and work with people. You will be examined implicitly and explicitly in these areas. Explicit evaluation will come in the form of asking you how you handled prior situations, such as when you disagreed with a manager. The implicit evaluation comes in the form of your interviewers watching how you interact with them. If you come off as too arrogant or too passive, your interviewer may feel you aren't great as a manager.
- *Prioritization:* Managers are often faced with tricky issues, such as how to make sure a team meets a tough deadline. Your interviewers will want to see that you can prioritize a project appropriately, cutting the less important aspects. Prioritization means asking the right questions to understand what is critical and what you can reasonably expect to accomplish.
- *Communication:* Managers need to communicate with people both above and below them, and potentially with customers and other much less technical people. Interviewers will look to see that you can communicate at many levels and that you can do so in a way that is friendly and engaging. This is, in some ways, an evaluation of your personality.
- *"Getting Things Done":* Perhaps the most important thing that a manager can do is be a person who "gets things done." This means striking the right balance between preparing for a project and actually implementing it. You need to understand how to structure a project and how to motivate people so you can accomplish the team's goals.

Ultimately, most of these areas come back to your prior experience and your personality. Be sure to prepare very, very thoroughly using the interview preparation grid.

▸ Startups

The application and interview process for startups is highly variable. We can't go through every startup, but we can offer some general pointers. Understand, however, that the process at a specific startup might deviate from this.

The Application Process

Many startups might post job listings, but for the hottest startups, often the best way in is through a personal referral. This reference doesn't necessarily need to be a close friend or a coworker. Often just by reaching out and expressing your interest, you can get someone to pick up your resume to see if you're a good fit.

Visas and Work Authorization

Unfortunately, many smaller startups in the U.S. are not able to sponsor work visas. They hate the system as much you do, but you won't be able to convince them to hire you anyway. If you require a visa and wish to work at a startup, your best bet is to reach out to a professional recruiter who works with many startups (and may have a better idea of which startups will work with visa issues), or to focus your search on bigger startups.

Resume Selection Factors

Startups tend to want engineers who are not only smart and who can code, but also people who would work well in an entrepreneurial environment. Your resume should ideally show initiative. What sort of projects have you started?

Being able to "hit the ground running" is also very important; they want people who already know the language of the company.

The Interview Process

In contrast to big companies, which tend to look mostly at your general aptitude with respect to software development, startups often look closely at your personality fit, skill set, and prior experience.

- *Personality Fit:* Personality fit is typically assessed by how you interact with your interviewer. Establishing a friendly, engaging conversation with your interviewers is your ticket to many job offers.
- *Skill Set:* Because startups need people who can hit the ground running, they are likely to assess your skills with specific programming languages. If you know a language that the startup works with, make sure to brush up on the details.
- *Experience:* Startups are likely to ask you a lot of questions about your experience. Pay special attention to the Behavioral Questions section.

In addition to the above areas, the coding and algorithms questions that you see in this book are also very common.

Acquisitions and Acquihires

During the technical due diligence process for many acquisitions, the acquirer will often interview most or all of a startup's employees. Google, Yahoo, Facebook, and many other companies have this as a standard part of many acquisitions.

Which startups go through this? And why?

Part of the reasoning for this is that their employees had to go through this process to get hired. They don't want acquisitions to be an "easy way" into the company. And, since the team is a core motivator for the acquisition, they figure it makes sense to assess the skills of the team.

Not all acquisitions are like this, of course. The famous multi-billion dollar acquisitions generally did not have to go through this process. Those acquisitions, after all, are usually about the user base and community, less so about the employees or even the technology. Assessing the team's skills is less essential.

However, it is not as simple as "acquihires get interviewed, traditional acquisitions do not." There is a big gray area between acquihires (i.e., talent acquisitions) and product acquisitions. Many startups are acquired for the team and ideas behind the technology. The acquirer might discontinue the product, but have the team work on something very similar.

If your startup is going through this process, you can typically expect your team to have interviews very similar to what a normal candidate would experience (and, therefore, very similar to what you'll see in this book).

How important are these interviews?

These interviews can carry enormous importance. They have three different roles:

- They can make or break acquisitions. They are often the reason a company does not get acquired.
- They determine which employees receive offers to join the acquirer.
- They can affect the acquisition price (in part as a consequence of the number of employees who join).

These interviews are much more than a mere "screen."

Which employees go through the interviews?

For tech startups, usually all of the engineers go through the interview process, as they are one of the core motivators for the acquisition.

In addition, sales, customer support, product managers, and essentially any other role might have to go through it.

The CEO is often slotted into a product manager interview or a dev manager interview, as this is often the closest match for the CEO's current responsibilities. This is not an absolute rule, though. It depends on what the CEO's role presently is and what the CEO is interested in. With some of my clients, the CEO has even opted to not interview and to leave the company upon the acquisition.

What happens to employees who don't perform well in the interview?

Employees who underperform will often not receive offers to join the acquirer. (If many employees don't perform well, then the acquisition will likely not go through.)