

Interview Preparation



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Software Development Engineer II



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Software Development Engineer II (SDE II) at Amazon

Software Development Engineers II (SDE II) solve complex problems and produce high production quality code. As they grow in their career, they will be able to scale larger. They will own end to end implementation of large customer facing products, starting from design through implementation.

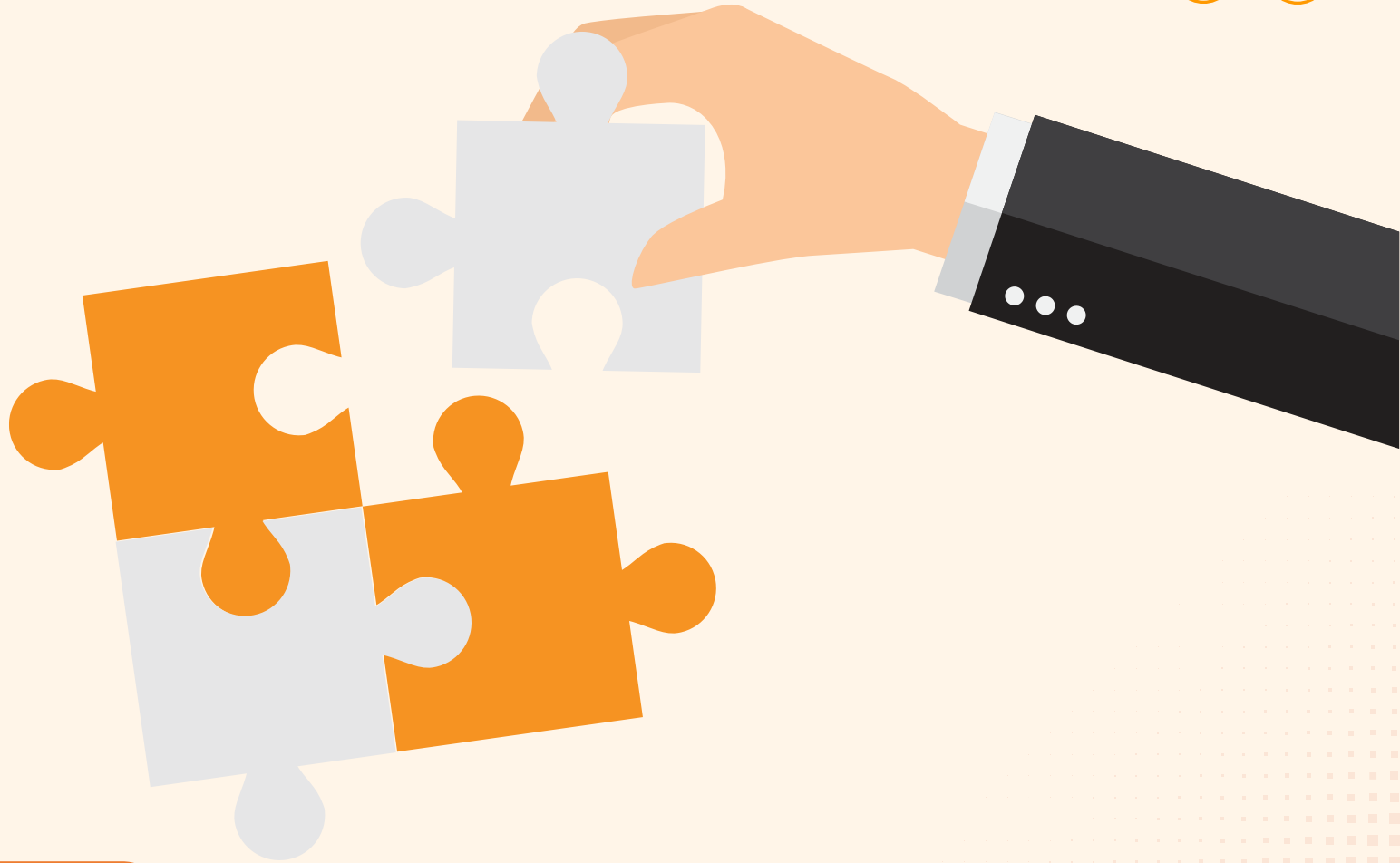
They will participate in designing and implementing key functional areas of the customer experience, including website applications and platform services. They will own designing and building functional components, including code reviews, testing, deployment and post-launch monitoring.

They will work extensively with cross-functional teams across Amazon's website, ecommerce and advertisement systems on the design and development of core Ads functionality. They will work with the business team and project managers to convert functional requirements into detailed technical specifications.

They will work with engineers both onsite and offsite to define technical tasks and build detailed implementation plans. They will own operating our products, driving excellence in feature stability, performance and flexibility.



Traits of a Successful SDE II



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Traits of a Successful SDE II



Programming Languages

We do not require that you know any specific programming language before interviewing for a technical position with Amazon, but familiarity with a prominent language is generally a prerequisite for success. Not only should you be familiar with the syntax of a language like Java, Python, C#, C/C++, or Ruby, you should be familiar with some of the languages' nuances, such as how memory management works, or the most commonly used collections or libraries, etc.

Data Structures

Most of the work we do involves storing and providing access to data in efficient ways. This necessitates a very strong background in data structures. You'll be expected to understand the inner workings of common data structures and be able to compare their usage in various applications. You will be expected to know the runtimes for common operations as well as how they use memory. Wikipedia is a great resource for brushing up on data structures.

Object-Oriented Design

Good design is paramount to extensible, bug free, long-lived code. It's possible to solve any given software problem in an almost limitless number of ways, but when software needs to be extensible and maintainable, good software design is critical to success. Using Object-oriented design best practices is one way to build lasting software. You should have a working knowledge of a few common and useful design patterns as well as know how to write software in an object-oriented way, with appropriate use of inheritance and aggregation. You probably won't be asked to describe the details of how specific design patterns work, but expect to have to defend your design choices.



Traits of a Successful SDE II






- 🎯 **Distributed Computing:** Systems at Amazon have to work under very strict tolerances at a high load. While we have some internal tools that help us with scaling, it's important to understand a few basic distributed computing concepts. Having an understanding of topics such as service-oriented architectures, map-reduce, distributed caching, load balancing, etc. could help you formulate answer to some of the more complicated distributed architecture questions you might encounter.
- 🎯 **Operating Systems:** You won't need to know how to build your own operation system from scratch, but you should be familiar with some OS topics that can affect code performance, such as: memory management, processes, threads, synchronization, paging, and multithreading.
- 🎯 **Algorithms:** Your interview with Amazon will not be focused on rote memorization of algorithms; however, having a good understanding of the most common algorithms will likely make solving some of the questions we ask a lot easier. Consider reviewing traversals, divide and conquer, and any other common algorithms you feel might be worth brushing up on. For example, it might be good to know how and when to use a breadth-first search versus a depth-first search, and what the tradeoffs are. Knowing the runtimes, theoretical limitations, and basic implementation strategies of different classes of algorithms is more important than memorizing the specific details of any given algorithm.



Traits of a Successful SDE II



-  **Coding:** Expect to be asked to write syntactically correct code - no pseudo code. If you feel a bit rusty coding without an IDE or coding in a specific language, it's probably a good idea to dust off the cobwebs and get comfortable coding with a pen and paper. The most important thing a Software Development Engineer does at Amazon is write scalable, robust, and well tested code. These are the main criteria by which your code will be evaluated, so make sure that you check for edge cases and validate that no bad input can slip through. A few missed commas or typos here and there aren't that big of a deal, but the goal is to write code that's as close to production ready as possible. This is your chance to show off your coding ability.
-  **Databases:** Most of the software that we write is backed by a data store, somewhere. Many of the challenges we face arise when figuring out how to most efficiently retrieve or store data for future use. Amazon has been at the forefront of the nonrelational DB movement. We have made Amazon Web Services such as DynamoDB available for the developer community that let them easily leverage the benefits of non-relational databases. The more you know about how relational and nonrelational databases work and what tradeoffs exist between them, the better prepared you will be. However, we don't assume any particular level of expertise.
-  **Internet Topics:** You're interviewing at Amazon. We do a lot of business online, and we expect our engineers to be familiar with at least the basics of how the internet works. You might want to brush up on how browsers work at a high level, from DNS lookups and TCP/IP, to socket connections. We aren't looking for network engineer qualifications, but a solid understanding of the fundamentals of how the web works is a requirement.



Interview process



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Amazon Hiring Process



Recruiter Connects
& Process Sharing



Online Assessment
(*Additional
Technical Interview
may be required)



Interview
Process Starts



All Done!
Outcome



What to expect during our interview process?



Interviewing for a SDE II role at Amazon usually takes completing an Online Assessment (OA) /Phone screen followed by onsite interviews. The interview panel will be comprised SDEs, Software Development Managers (SDM), Technical Program Managers (TPM) across teams.

How to answer interview questions?

We recommend using the [STAR](#) methodology



- To help provide an organized and structured example that will help you stay on topic.
- The interviewer will dive deeper into specific areas and ask probing follow-up questions.
- The level of measurement is defined by scope, scale and impact.



Behavioral Questions



Interviewers at Amazon will ask you behavioral-based questions to understand past situations or challenges you have faced and how you handled them, using Leadership Principles to guide the discussion. We do not use brain teasers (e.g., “How many windows are in Manhattan?”) as part of the interview process. We’ve researched this approach and found that those types of questions are unreliable when it comes to predicting a candidate’s success at Amazon.



Behavioral Question

Sound like **“tell me about a time...”** or **“Give me an example...”** and are based on Amazon Leadership Principles. Remember, interviews are generally historical and focus on the “what” and the “how” of your experience. The interviewers at Amazon want to understand the “why” of your decision process.



Our 16 Leadership Principles



We use our [Leadership Principles](#) every day, whether we're discussing ideas for new projects or deciding on the best approach to solving a problem. It is just one of the things that makes Amazon peculiar. All candidates are evaluated based on our [Leadership Principles](#). The best way to prepare is to consider how you've applied the Leadership Principles in your previous professional experience.

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Our 16 Leadership Principles



Customer Obsession

Example Question:

Tell me about a time you worked backwards from a customer problem — how did you solve it?



Deliver Results

Example Question:

Tell me about a time when you helped others remove barriers/roadblocks towards meeting team goals?



Ownership

Example Question:

Tell me about a time when you took on something outside of your area of responsibility?



Dive Deep

Example Question:

Tell me about the most complex problem that required a lot of in-depth analysis



Our 16 Leadership Principles



[Bias for Action](#)

Example Question:

Tell me about a time you had to make a quick decision with incomplete information. How did you make it and what was the outcome? or Tell me about a time when you were working on a tough deadline and you did not have the time to consider all options.



[Have Backbone Disagree & Commit](#)

Example Question:

Tell me about a time when you pushed back against a decision that negatively impacted your team.



[Earn Trust](#)

Example Question:

Tell me about a time when you had to communicate a change in direction that you anticipated people would have concerns with. What did you do to understand the concerns and mitigate them?



[Think Big](#)

Example Question:

Give a specific example where you drove adoption for your vision and explain how you knew it had been adopted by others.



Our 16 Leadership Principles



[Insist On High Standards](#)

Example Question:

Tell me about a time when you raised the quality bar by demanding that your team delivers high quality products, services and solutions. Tell me about a time when you used feedback about your team to drive a change.



[Frugality](#)

Example Question:

Tell me about a time when you had to make tradeoffs between quality and cost. How did you weigh the options? What was the result? Would you have done anything differently?



[Learn and Be Curious](#)

Example Question:

Describe a time when you were challenged to think differently in order to find a better solution to a problem. When was the last time you intentionally took on something that was outside of your comfort zone?



[Hire and Develop The Best](#)

Example Question:

Tell me about a time when you helped a remote team member develop their career



Our 16 Leadership Principles



**Strive to be
Earth's Best
Employer**

Example Question:

Tell me about a time when you noticed someone was being excluded or treated unfairly. Were you able to do anything to help?



**Are Right
A Lot**

Example Question:

Tell me about a time when you did not have enough data to make the right decision. (ambiguous situation).



**Invent and
Simplify**

Example Question:

Give me an example of a complex problem you solved with a simple solution. What made the problem complex? How do you know your solution addressed the problem?



**Success and
Scale Bring Broad
Responsibility**

Example Question:

Tell me about a time when you changed course because of the negative impact you were going to cause to a third-party.



Interview Tips



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Interview Tips



Be prepared to explain what interests you about the role and the team(s) you'll be meeting with.



Be concise but detailed in your answers; the right level of detail can be difficult to gauge. A good test is to pause after your answer to ask if you've given enough detail or if the interviewer would like you to go into more depth.



"Why Amazon?" is a common question in our interviews. Help us understand what inspired you to explore an opportunity with us, so we can get a better sense of who you are.



If you're asked a question but aren't given enough info to provide a solid answer, ask for clarification. If additional context isn't available, focus on how you'd attempt to solve the problem based the information given.



Your interviewer will likely leave few minutes at the end of the interview to answer questions. If we don't get to all of them, don't hesitate to ask your recruiting point of contact.



Multiple Examples: For leaders at this level, we are looking for the depth and breadth of your experience to draw from when solving a customer problem. If you've already used an example more than once, let your interviewer know



Quantify: Provide data for examples whenever possible.



Did you mention the customer? Amazon is customer obsessed and it is highly important you include the customer, whether internal or external in your situation. Be able to put the customer's viewpoint by starting with the customer working backwards.



Interview Prep Videos



The Interview Process – General Overview



**Amazon In-Person Interview Tips;
Amazon Onsite Interview Prep-guide**



SDE Interview Coding; System Design Prep



SDE Online Assessment



Amazon Leadership Principles (SIP)



Working at Amazon



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Working at Amazon



[Our Culture](#)

At Amazon, we work with smart, passionate people who are building new products and services every day on behalf of our customers.

[Learn about our peculiar culture](#)



[Benefits](#)

We offer a range of benefits that support you and eligible family members, including domestic partners – starting with healthcare from day one.

[Explore our benefits](#)



[Learn New Skills](#)

Amazon is investing \$700 million to train 100,000 U.S. employees with new skills so they can access in-demand, higher-paying jobs at Amazon or elsewhere.

[Get new skills](#)



[Diversity & Inclusion](#)

Diverse and inclusive teams have a positive impact on our products and services, and help us better serve customers, employees, and members of the community.

[Bring your voice](#)



[Sustainability](#)

We are making big, bold commitments in sustainability because it's a win all around – it's good for business, the planet, our customers, and our communities.

[Amazon's Climate Pledge](#)



[In the Community](#)

We are committed to ensuring children and young adults in the communities where we operate have the resources and skills they need to build their best futures.

[See how we get involved](#)



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Questions? Reach out to your recruiting point of contact.
Amazon is an equal opportunity employer.

