****“So, tell me about yourself…”****

“Thank you for asking. I would describe myself as a collaborative and solution-driven software engineer with over two years of experience working with designers, developers, and programmers holding a degree in Computer Science from Purdue University.

I've already contributed to over a half dozen projects and assisted with managing a project for one of our firm's long-time clients.

Something I’ve enjoyed and has been able to use in my current role is leveraging my experience in tech support to help identify and resolve complex issues.

And over the last year, I worked on several project teams using C++, Python, JavaScript, C#, and PHP and recently started Java. Since this role asked for Java, I signed up and started an online Java course to increase my knowledge as quickly as possible.

I believe my experience has allowed me to hone my attention to detail and critical thinking skills as well as enhance my communication skills working on team-based projects and with clients.

In my last role in tech support, I received several commendations from customers where I was able to identify and resolve their technical issues with clarity and ease.

I’m excited to collaborate on a team and apply my technical skills to develop applications and systems along with contributing to your team in a way that positively impacts the organization and your clients”

### **What programming languages are you familiar with?**

*“I am proficient in Java, C++, JavaScript, C#, Ruby and Python. Of these programming languages, I feel most comfortable working with Java, C# and C++. In my previous role, I worked mainly with Java to create applications that worked across multiple platforms. I also used C++ to develop a new operating system that worked with the applications I engineered. Using C#, I was able to improve my productivity when developing web-based apps and software.”*

***Describe the last project you worked on, including any obstacles and your contributions to its success.***

*Certainly! If your last project was related to an E-Mechanics application, you can structure your response like this:*

*"In my fourth year, I undertook a comprehensive project focused on developing an E-Mechanics application, a web-based platform connecting car owners with nearby mechanics for efficient breakdown assistance. The primary objective was to create a user-friendly interface that streamlined the process of locating and requesting help during vehicle breakdowns.*

*Obstacles:*

*One significant challenge we encountered was ensuring real-time communication between drivers and mechanics, considering the diverse technical specifications of various vehicles. Additionally, integrating a secure payment system for transactions posed another hurdle, requiring in-depth research into payment gateways and data encryption to ensure user privacy and financial security.*

*Contributions:*

*In addressing these challenges, I played a crucial role in designing the user interface, ensuring it was intuitive and accessible for both drivers and mechanics. I actively participated in the development of the communication module, implementing features that allowed users to send instant requests to mechanics in their vicinity.*

*Moreover, I took the initiative to research and implement a secure payment gateway, collaborating with team members to integrate a reliable system that facilitated seamless and secure transactions between users and mechanics.*

*Throughout the project, I consistently maintained open communication with team members, providing regular updates on*

*Tell me about your experience coding in Java?*

*What are your thoughts on design patterns?*

*What is your experience with Eclipse?*

*Tell me about a time when you had to debug a piece of code?*

***What is your experience with git?***

*"I have experience using Git as a version control system throughout various software development projects. I am proficient in performing standard Git operations such as creating repositories, branching, committing changes, merging branches, and resolving merge conflicts.*

*In collaborative environments, I have effectively used Git for team-based projects, ensuring smooth collaboration by managing code changes, tracking revisions, and facilitating a streamlined development process. I am comfortable with both command-line Git and popular Git GUIs, such as GitHub Desktop or Sourcetree.*

*Additionally, I am familiar with Git workflows, including feature branching and Gitflow, and have employed these strategies to maintain a structured and organized development process. My experience with Git extends to utilizing GitHub and GitLab for code hosting, collaboration, and project management****.***

***Tell me about a time when you had to work with a difficult codebase?***

***Tell me about a time when you had to solve a difficult problem?***

*Certainly! In a challenging situation during the development of our E-Mechanics project, we encountered a significant hurdle related to the real-time communication module between drivers and mechanics. Users were experiencing delays and disruptions in the communication process during breakdowns. As the lead developer, I took charge of the situation by conducting a detailed analysis of the codebase, identifying bottlenecks, and assessing the overall system architecture. Collaborating with the team, we implemented incremental fixes to alleviate immediate issues, focusing on optimizing data transfer and enhancing message processing efficiency. Additionally, I organized regular team meetings to brainstorm and discuss potential solutions, fostering a collaborative problem-solving environment. The outcome was a substantial improvement in the real-time communication module, ensuring prompt and reliable assistance for users during breakdowns and reinforcing*

***Tell me about a time when you had to troubleshoot an issue?***

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In my role as an IT Support Specialist, I encountered a challenging situation when a department reported a sudden network outage that disrupted their daily operations. I immediately initiated the troubleshooting process by first assessing the extent of the issue. Through active communication with end-users, I gathered information about when the problem started, which systems were affected, and any recent changes in the network setup. Utilizing network monitoring tools, I identified abnormal traffic patterns and narrowed down the issue to a specific switch in the department's area. Taking a systematic approach, I inspected the switch, discovering a faulty port that was causing intermittent connectivity. I promptly replaced the malfunctioning hardware, reconfigured the network settings, and conducted thorough testing to ensure a complete resolution.

***What is your experience with JIRA?***

***Tell me about a time when you had to use your problem solving skills?***

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, I encountered a significant problem during my final-year project, which involved developing a mobile application. The app's user authentication system was consistently failing during testing, preventing users from accessing the platform's features. To address this challenge, I applied my problem-solving skills by first isolating potential issues in the code related to user authentication. I meticulously reviewed the codebase, conducted research on relevant forums and documentation, and sought advice from my project supervisor. Through this process, I identified a coding error that was causing authentication failures. I promptly rectified the issue by adjusting the authentication logic and conducted extensive testing to ensure the reliability of the system. This experience not only showcased my ability to troubleshoot and resolve technical issues but also highlighted the importance of persistence and resourcefulness in overcoming challenges as a recent graduate entering the professional realm.

***Top 25 technical interview questions for a Software Engineer Intern***

***What is your favorite coding language and why?***

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I appreciate the versatility of PHP, JavaScript, and Java, each serving distinct roles in the software development landscape. PHP's simplicity and effectiveness in server-side web development make it a go-to choice for dynamic websites. JavaScript's impact on front-end development is undeniable, enabling interactive user interfaces and asynchronous web applications. Meanwhile, Java's robust and scalable nature positions it as a powerhouse for diverse applications, from enterprise-level systems to mobile app development. Embracing these languages allows me to navigate various aspects of software development, leveraging their unique strengths to address the specific needs of different projects.

***What was a difficult problem you solved as a software engineer intern?***

***What are the most important qualities that a software engineer should have?***

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Effective software engineers possess a combination of technical skills and personal qualities that contribute to their success in the field. Here are some of the most important qualities for a software engineer:

Strong Problem-Solving Skills:

The ability to analyze complex problems and design effective solutions is a cornerstone of software engineering.

Programming Proficiency:

Mastery of programming languages relevant to the role, with a focus on clean and efficient code, is crucial.

Attention to Detail:

A keen eye for detail ensures that software engineers catch and rectify errors in code, leading to more robust applications.

Continuous Learning:

The tech industry evolves rapidly, so a commitment to ongoing learning and staying updated on new technologies is essential.

Collaboration and Communication:

Effective communication skills are vital for conveying ideas, collaborating with team members, and understanding end-users' needs.

***What makes you a good fit for this internship?***

I have all the skills and qualifications listed in the job description, and if you hire me, I promise to deliver quality work throughout the tenure of the internship. I possess excellent communication skills, I'm a team player, and most importantly, I'm a dedicated worker. All I want is a chance to prove it to you.

***What are your career aspirations as a software engineer?***

***What led you to pursue a career in software engineering?***

I was inspired to pursue a career in software development by my love of problem-solving and my desire to create things. I have always been fascinated by how computers work and how they can be used to solve complex problems. I am also excited by the potential to use software to make a positive impact on the world.

***What are the most important qualities that a software engineer should have?***

***What coding languages are you proficient in?***

***What are your thoughts on object-oriented programming?***

***What is your approach to problem solving?***

***How do you handle projects with tight deadlines?***

*one of my tasks was to prepare research presentations on complex topics for scientific meetings. This required coordination with researchers, gathering data and including visuals such as charts and graphs. While preparing a presentation, I learned how to optimize my time and meet deadlines by using project management tools to ensure my presentation was timely and that I included ever required.*

*I also wrote to-do lists to track my tasks and make it easier to prioritize what required completion within a certain amount of time. Setting aside a specific amount of time for the parts of the presentation I knew would take a longer time to complete, such as data collection and analysis, I found that this helped me meet deadlines faster and earn more favorable feedback on the information in my presentations."*

***What is the most challenging project you have worked on?***

***How do you handle conflicts with team members?***

*“While working on a project for a previous employer, one of my team members regularly challenged every solution I presented. He also had a tendency to interrupt and talk over others without listening to their input. I experienced a challenge in maintaining my patience when he interrupted others without listening. It reached a point where our respective managers counseled both of us on our behavior.*

*“To resolve this conflict, I had to recognize that I cannot change or control his behavior. I also acknowledged that this behavior, from both of us, was likely a result of stress due to the heavy workload of the project. Therefore, I adjusted my own communication style to increase empathy, avoid triggers and build patience with interruptions. We were able to complete the project and maintain polite correspondence whenever we needed to work together after that.”*

***Describe a time when you had to go above and beyond the call of duty.***

***Tell me about a time when you made a mistake and how you handled it.***

HHDuring my internship as a software engineering student, I initially struggled with the hesitation to ask questions. Feeling a bit overwhelmed in a new environment, I was concerned about burdening my colleagues with my inquiries. In my performance review, my manager expressed that they noticed a gap in my learning and suggested that I should be more proactive in seeking clarification. This feedback was a pivotal moment for me. I realized the importance of overcoming my hesitation to ask questions in a technical setting. From that point forward, I made a conscious effort to reach out for guidance and clarification whenever needed. Embracing a more inquisitive approach significantly accelerated my learning curve, and by the end of the internship, I had not only resolved the initial learning gap but also gained valuable insights. This experience has shaped my commitment to continuous learning, and I now recognize the significance of seeking guidance to enhance my skills in software engineering. It's a lesson I carry forward as I progress in my academic and professional journey."

***Tell me about a time when you had to deal with a difficult customer or client.***

***Tell me about a time when you had to take on a leadership role.***

"In a group project during my [mention a relevant academic or professional experience], our team faced challenges in coordinating tasks and meeting project deadlines. Recognizing the need for better organization and leadership, I stepped into a leadership role. I initiated a team meeting to discuss individual strengths, preferences, and project expectations. Through open communication, I delegated tasks based on team members' expertise and interests, ensuring a more efficient workflow. I established regular check-ins to monitor progress, address concerns, and provide support where needed. By fostering collaboration and maintaining a positive team dynamic, we successfully delivered the project on time, exceeding our initial

***Tell me about a time when you had to deal with a difficult situation.***

Certainly! Here's a sample response tailored for a software engineer graduate:

"In my final year of studies, I was leading a team project focused on developing a complex software application. Midway through the project, we encountered a significant setback when a critical external API, which we heavily depended on for data integration, underwent unexpected changes. The alterations in the API structure led to compatibility issues, jeopardizing the entire project timeline.

To address this, I took immediate action by convening an emergency team meeting to assess the impact and devise a solution. We conducted an in-depth analysis of the changes in the API, identified areas of our codebase that needed adjustment, and formulated a plan for refactoring and testing. Simultaneously, I reached out to the API provider for clarification on the modifications and potential workarounds.

Throughout this challenging period, clear and open communication within the team was paramount

***Describe a time when you had to think outside the box to solve a problem.***

***Tell me about a time when you had to deal with a difficult customer or client.***

***Describe a time when you had to work on a tight deadline.***

***Tell me about a time when you had to take on a leadership role.***

***Describe a time when you had to think outside the box to solve a problem***

***Top 25 behavioral interview questions for a Software Engineer Intern***

***Tell me about a time when you had to figure out how to do something new without any clear instructions.***

***Tell me about a time when you ran into a problem while working on a project. How did you go about solving it?***

*When I'm faced with a problem, I typically start by doing research or looking at examples of how this problem has been solved by others. From that research, I'm able to decide which approach to solving the problem works best for me and the organization. Then, I decide what actions need to be taken to solve the problem, and I start putting the process into motion while communicating with my managers and co-workers.”*

***Tell me about a time when you had to work with someone you didn't get along with. How did you handle the situation?***

***Tell me about a time when you had to deal with a difficult customer or client. How did you handle the situation?***

***Tell me about a time when you made a mistake while working on a project. How did you handle it?***

***Tell me about a time when you ran into a technical difficulty while working on a project. How did you solve it?***

***Tell me about a time when you had to present your work to a group. How did you prepare and what was the outcome?***

***Tell me about a time when you had to manage multiple tasks or projects at the same time. How did you prioritize and stay organized?***

***Tell me about a time when you had to work on a project under a tight deadline. How did you handle the pressure?***

***Tell me about a time when you had to take on additional responsibility at work due to someone else being out sick or on vacation. How did you handle it?***

***Tell me about a time when you had to give critical feedback to a peer or coworker. How did you handle it?***

***Tell me about a time when you had to troubleshoot a problem. How did you go about it?***

***Tell me about a time when you had to figure out how to do something new without any clear instructions.***

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