5520 Research Park Dr, Catonsville, MD 21228, United States

Screening Test/Interview Questions for Software Engineer (Remote) Position.

Instructions: Please precede all your answers with the question you are answering.

Use acronyms only after you've explained them.

Use correct spelling and grammar.

Email back your answers using either doc or pdf format.

Candidate's Name:

1. Are you currently unemployed?
2. Can you explain the difference between procedural programming and object-oriented programming?
3. What is the importance of version control systems like Git in software development?
4. Describe the difference between front-end and back-end development. Which do you prefer and why?
5. How do you ensure the security of a web application you're developing?
6. Can you explain the concept of Big O notation and why it's important in algorithm analysis?
7. What are some common data structures, and when would you use each one?
8. How do you approach debugging and troubleshooting when you encounter a problem in your code?
9. Can you discuss the advantages and disadvantages of using a relational database versus a NoSQL database?
10. Explain the concept of RESTful APIs and why they are commonly used in web development.

11. What is continuous integration and continuous deployment (CI/CD), and how does it benefit software development projects?
12. How do you approach debugging issues in both frontend and backend code?
13. What is your familiarity with cloud platforms like AWS, Azure, or Google Cloud?
14. What is your experience with automated testing?
15. How do you ensure the scalability of a software system you're designing?
16. Can you describe the agile software development methodology and its key principles?
17. Have you worked with any particular programming languages or frameworks? If so, which ones and what projects did you use them for?
18. Describe a challenging problem you faced in a previous project and how you approached solving it.
19. How do you stay updated with the latest trends and technologies in the field of software engineering?
20. How do you contribute to a positive team culture, especially in a remote or distributed team environment?
21. What are your professional development goals?
22. How could your skills and experience add value to our organization?
23. How much will you request per hour if you are hired?

Full Job Description

Department: Software Development.
Reports to: Senior Developer.
Location: Remote.
Schedule: 35 hours weekly.
Salary: $45.93 - $55.33 per hour.
Job Type: Full-time.
Schedule: Monday to Friday.

Company Description:

At Sparksoft, our mission is to ignite innovation, inspire transformation, and implement digital solutions for a healthier nation. We believe that passion drives great ideas, collaboration builds better solutions, and valuing integrity creates a culture of positive change. We have supported critical and high visibility IT projects, built award-winning applications, kick-started an in-house innovation lab, and developed new tools that save you time and money through a project life cycle. We aren't about "business as usual".

Our Engineering team gets to innovate and experiment daily with some of the latest technologies in our industry for a product that is paving the way in our space. We are always

looking for opportunities to learn, grow, and have fun with each other. Our team culture encourages individuality, collaboration, and creative problem solving.

The Software Engineer appreciates the complexities of building a product (SAAS) and understands software architecture so that solutions are clever enough to solve the immediate problem, flexible enough to adapt to our changing market, and simple enough to maintain so that it can stand the test of time.

Responsibilities:

- Collaborate with product management to create product roadmap and validate user stories

- Develop technical specifications for new products and services

- Drive prototype development to ensure feasibility of designs or validate use of emerging technologies

- Understand the broader context of the technology vision, and advise management and product about tradeoffs that may impact schedules

- Lead projects and provide technical guidance and mentorship to scrum team members

- Perform design and code reviews, validate that designs are fulfilling user story criteria

- Align solutions with architectural direction and standards across teams

- Tackle complex technical problems; perform root cause analysis; and implement effective solutions.

- Identify areas of technical debt, outline what needs to be done and communicate ROI urgency of addressing.

- Assist in recruiting initiatives.

- Maintaining high-quality technical documentation for code, systems, and processes.

The Desired Attributes:

- 3 years of software development disciplines and deep technical skills
- Mastery in at least one of: Golang, Javascript (React or Angular), Ruby on Rails, C#.NET, Java
- Expertise in a technical area such as: Video Streaming, Security, Machine Learning, Front-end development, Event-Driven Design, Microservices
- Strong understanding of software design patterns, algorithms, and data structures
- Experience with microservices, containerization, cloud platforms (AWS preferred)
- Experience in profiling and optimizing the performance of complex systems
- Experience in optimizing tables and queries for Postgres
- Knowledge of security best practices, encryption techniques and compliance standards

- Strong follower of agile/scrum methodologies

Benefits:
- Competitive Salary
- Exceptional Benefits:
- 401(k) plan with company matching & immediate vesting schedule (100% of the 1st 3% and 50% of the next 2%)
- BCBS Health, Dental, & Vision Insurance with generous employer funding for employees and dependents
- Generous flexible time off approach
- Professional development
- Remote and hybrid first organization
- Great working environment with a team of exceptional people

At **Sparksoft**, Our core values of integrity, collaboration, and client-centricity are at the heart of everything we do. We believe in building long-term partnerships based on trust, transparency, and mutual success. Our dedicated team works closely with our clients to gain a deep understanding of their business needs and challenges, enabling us to deliver digital health solutions that truly make a difference.