

Preliminary Online Interview Test for Senior / Experienced Tech Talents

(i.e Senior IT Project Manager, Senior Developer, Senior Infrastructure Engineer, Senior Digital Marketer, etc)

Thank you for your application. Our recruitment process is in 3 stages. We have decided to carry out the first stage online. The other 2 stages will be physical interviews at our Offices in any of our locations or as Virtual Interviews (where applicable)

Find below the Technical Interview Questions. Before commencing, kindly acknowledge receipt of this Email.

Note: You will need to complete the test within 24 hours of getting this notification.

STEP 1

Kindly answer the attached question.

STEP 2

Upload your solution to any temporary hosting for assessment.

STEP 3

When you have completed the test, Kindly complete this online form to inform our team of completion

<https://blog.bincom.net/bincomforms/bincom-recruitment-online-interview-submission-form/>

The submission should contain:

1. An online link to the working solution that can be viewed by the Assessors.
2. A link to your working code files (preferably a link to an online repository or storage)

Wishing you all the best.

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Last Updated: 1st November 2022 - Time Allowed: 24 hours

Section 1: Previous Experience

Please state the field / area of expertise applied for ? Senior Full Stack Engineer

How many years of RELEVANT experience do you have in the field ? 5 Years

Please provide detailed descriptions of at least 2 digital technology projects or products you handled. We are interested in understanding your specific role in the project?

Project 1:

Name of project / product	Arraund
Short Description of project / product	<p>Arraund is a third-party marketplace x Business directory software. The platform focuses on minimizing the time and resources spent between the conceiving of the idea to purchase goods or services from a business to the delivery of such goods or services.</p> <p>The business directory service helps people locate all kinds of businesses(as well as the products and services they offer), and its marketplace offers ecommerce features such as order placement, online</p>

	payments, etc.
Strategy used in implementing the project / product	Product Design, Differentiation of product, Product Innovation, life cycle and continued development, product development and production, API
Tools used for project	AWS (SES, Workmail, S3, EC2, etc), PHP, Javascript, HTML, Linux, Paystack, Google Map API, GitHub
Link to the screenshot of the project	https://business.arraund.me
What was your role in the project	I was the lead full stack engineer on this project
Please describe some of the key activities of the project to enable us understand its complexities and your tasks in the project	<ol style="list-style-type: none"> 1. Designing the UI/UX: We took a couple of days after a thorough research to come up with designs that are beautiful, stand out and are effective in communicating information and the brand image. 2. Choosing the tech stack to use: I personally took some time to research on the best tech stack to use for this project as the lead full stack engineer. I chose PHP/Laravel for the backend because of its multithreaded processing because the project contains some heavy processing codes that run synchronously(because asynchronous processing would be impractical in these situations), I chose AWS for the cloud infrastructure because of the widespread support and availability of resources. I used AWS S3 for storing media files as the platform is expected to contain a large number of media files(esp pictures) for products and services listed on, and AWS S3 has a good performance benchmark for file storage and retrieval, and is very scalable. I set up AWS SES for auto mailing on the platform through the SDK. I used AWS Workmail for company staff mail accounts and set up the necessary SPF, DKIM and DMARC verifications by altering DNS records. 3. Version control setup: Different Github repositories were set up for different sections of the project and different branches were set up in these repositories to maintain different code groups. 4. Integrating the payment gateway: I used paystack for this project because of their

	<p>developer friendly API and robust documentation. After testing with the test public and secret key, I submitted the required documents to get a live account and turned on live payments.</p> <ol style="list-style-type: none"> 5. Testing and Code Review: After writing the code, I confirmed the efficiency of the code by passing it through multiple tests to test performance. 6. Optimization: During the testing phase, speed was an important metric, and code that was observed to run slowly was optimized for better speed. Also, very importantly, resources such as images, font files, stylesheets that were observed to be unnecessarily large (and hence increased loading time) were optimized by compression and minification. 7. Debugging: Bugs such as wrong links, broken UI components which were observed were tackled. 8. Deploying: For deployment, Github was used for easy and fast deployment. A production repo was set up where production ready files (after testing and optimization) were committed and pulled for fast deployment and easy version control.
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Project 2:

Name of project / product	Flexipay
Short Description of project / product	Flexipay is an E-commerce platform with an underlying flexible payment (hence the name FlexiPay) infrastructure.
Strategy used in implementing the project / product	Product Design, Differentiation of product, Product Innovation, life cycle and continued development, product development and production, API, Microservice architecture
Tools used for project	PHP/Laravel, ReactJS
Link to the screenshot of the project	https://flexipay.ng
What was your role in the project	Backend Engineer
Please describe some of the key activities of the project to enable us understand its complexities and your tasks in the project	Design Deployment Optimization

	Payment gateway integration
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Section 2: Role Fit

In this section, we seek to understand from your perspective how your profile and experience fits this job role.

In ALL CASES, Please include SPECIFIC examples and if possible links to projects.

Where possible, use the STAR model (https://www.vawizard.org/wiz-pdf/STAR_Method_Interviews.pdf) to answer the questions.

Job Requirements	Briefly Describe How your Profile and Experience Matches this Requirement.
proven Experience in relevant Tech field	I have worked solo in building projects, but most importantly have worked with teams of engineers and designers to build and deploy large products.
HND/BSC in any related field or commensurate experience	B.Eng, Electrical Electronics Engineering
What software tools / technology tools have you used to fulfil your role ?	VScode, Arch Linux, Sublime text, LAMPP
Have you led a tech team before? How do you keep track of everyone's work?	<p>Yes I have led a tech team before. How I kept track of everyone's work;</p> <ol style="list-style-type: none"> 1. Daily "Micro" updates on team communication platform. 2. Goal setting and tracking through management software 3. General weekly reviews
Have you ever dealt with conflicts on a project? If so, how did you handle them?	<p>Yes I have. One time, the design team was slow in delivering continuous designs (as we had to make redesign iterations due to customer requests and project changes) and this caused a road block on the path of the front end engineers.</p> <p>I resolved this by asking the front end engineers to</p>

	<p>build mock front end components while waiting for the designers to finish up.</p> <p>I tasked them with conceptualizing all the required user inputs, and backend/API responses and putting them together into a mock frontend deliverable, just so that they could write the front end controllers/logic.</p> <p>This saved us time as by the time the designers were done, the front end logic/controllers (which would have been begun by this time) had already been written.</p> <p>It also reduced the pressure on the designers and allowed them time to come up with beautiful designs.</p>
How often do you meet with your team during a project? Do you prefer to meet with the entire team or just team leaders? Why?	<p>How frequently I meet with my team is completely dependent on the project we are working on. But as a general rule of thumb, at least once every week.</p> <p>I prefer meeting with the team leaders. This is because I have learned that team leaders have a better connection with their teammates and hence can help them understand project requirements better.</p> <p>Also, they are called team leaders for a reason, hence they should be given the chance to lead.</p> <p>I do love to meet with the entire team once in a while though.</p>
Describe one of your most challenging projects so far. Why was it challenging and what did you do to overcome the difficulties?	<p>A farm management software.</p> <p>This project was really challenging and not because of the team, but because of the client.</p> <p>The client was a medium sized chicken and catfish farm that sought to use technology to keep track of their inventory, both products and other resources such as diesel, feeds, and also keep track of expenses and income, to determine a profitable sale price for their products.</p> <p>We tried to literally replicate all their manual processes with software.</p> <p>The challenge was that after debriefing the CEO and Manager, we went on to build the first version. When we presented the version 1, the staff of the farm complained to us that the processes we captured in the software did not represent what they do in the farm. It turned out the CEO and Manager did not really know or understand the processes in the farm.</p>

	<p>Hence, we had to debrief some staff again in order to get the right information to rebuild the software.</p> <p>We also did this and when we returned with version 2 after a couple months, the same thing ensued. It turns out that the staff we debriefed did not give us sufficient information for the various parts/sections of the farm.</p> <p>How I resolved this is that I, after negotiating a pay with the farm CEO and manager, personally stayed back on the farm for a couple days to get a personal understanding of their processes so we could rebuild the software to be effective and correct.</p>
How do you approach task assignment within your team?	Teammates are allowed to ask for tasks they feel they can deliver. Where there is a need for more specialty, specific teammates are assigned tasks based on their experience levels.
Describe a time when you realised your current approach wasn't working and how did you resolve it ?	As mentioned above, during the farm virtualization project, I realized that debriefing staff was not sufficient to get the right information for building the desired software, I had to change my approach of data gathering by staying on the farm myself to gather information.
Describe your experience in working with Agile Methodology?	<p>Agile methodology is my preferred project management methodology.</p> <p>Whenever a new project emerges, I usually take a couple days and sometimes, weeks, to carefully plan out the project into several phases and milestones using a tool I have become very fond of: https://whimsical.com.</p> <p>For every phase or milestone achieved, we push to production (controlled, to prevent usage). This not only satisfies the client, but it also motivates the team as we can see a working (though incomplete) sample of our work.</p>

Section 3: Skills

Please share with us links to some of your work that is in public domain. Github, Stackoverflow, Hackerrank and similar are acceptable.

Our objective is to assess the quality of your work. Should you not have anything available in the public domain, we will have to give you a relevant test to access your skill.

I. <https://business.arraund.me>

II. <https://arraund.me>

III. <https://flexipay.ng>

IV. <https://jsandn.com>

V. <https://aidmedium.com>