Intern Basic Competency Test

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Technical Competency Test:

1. Can you list few techniques which you can use to make responsive websites as a frontend developer?

2. How can you test a website responsiveness? Which tools in modern browsers you can use for that?

3. What is your favourite text editor and why?

4. What is the one keyboard shortcut you wish everyone would know?

5. What was the last article or book you have read related to IT? What did you learn from it?

6. Have you ever worked with API? Can you describe what is it for?

7. Ignoring cookies, what other technology or approach you can use to store data on client side?

8. Pick a site you are familiar with and list 3-5 things you would do to improve its UI/UX.

1. Can you list few techniques which you can use to make responsive websites as a frontend developer?

Responsive Design is a technique for structuring HTML and CSS, which consists of adapting the site to the user's browser without having to define several specific style sheets for each resolution.

Techniques:
Keep your layout clean.
Use Doctype html5
Use CSS
Simple and semantic code
Simple techniques for elements such as navigation bars, menus, etc.
Use Media Queries

Avoid:
Unnecessary div's
Inline CSS styles (always use external files)
JS or Flash files without fallback
Position absolute or unnecessary float placements
Avoid redundant codes or codes that are not 100% useful.

The best way to ensure that a website is responsive is to test the website in many different scenarios as possible. During the development and before the end of the project, it is necessary to test the website considering all the possible scenarios, such as test the website across different screen sizes (mobile, tablet, desktop, television). Test a website is essential to see and correct issues.

2. How can you test a website responsiveness? Which tools in modern browsers you can use for that?

In a responsive test, it can be started by manually, testing the website on various viewport sizes, checking if the content scales to fit correctly, finding inconsistencies in colours, fonts. Also, it is necessary to use some tools which can help to do a mobile responsive test using real mobile devices, testing live on different devices, browsers, and possible operating systems.

Tools:

<u>TestMySite by Think With Google</u>

TestMySite is one of the tools that Google recently launched. It allows you to test a website for mobile use. It tests the performance and speed, both on desktop and mobile devices. The tool inherits features from the already known Google's Search Console's and PageSpeed Insights tools.

<u>WebSitePlanet</u>

The website allows you to browse a URL on different devices of different sizes.

<u>Chrome Developer Tools:</u>

Dev Tools indicates in a simple and clear way what is happening in the browser giving tips on how to resolve such failures.

3. What is your favourite text editor and why?

One of my favourite text editors is NetBeans as an IDE for JAVA development especially for GUI development. As it supports many programming languages. It is possible to interact with database server directly without the need to use external tools.

For the development of web applications, I like to use Visual Studio Code, due to its ease of use and features and integrations. It can be run on Windows, Linux, or Mac.

For mobile I like to use Android Studio for creating designs using xml, for being able to test applications directly on mobile.

4. What is the one keyboard shortcut you wish everyone would know?

Ctrl + F: Helps the user to find things quickly.

Netbeans:

Alt + Shift + F: Auto Indentation.
Alt + Insert: Shows context menu to generate code e.g., insert constructor, getters, and setters.
Ctrl + S: Saves the current file.
Ctrl + Shift +S: Saves all files.
Ctrl + Shift + U: Create Unit test.
Ctrl + Shift + T: Go to JUnit

5. What was the last article or book you have read related to IT? What did you learn from it?

The most recently article that I have read was "Small Business Information Security": The Fundamentals, which was referenced by professors from my post-graduation.

I was able to learn about the fundamentals of information security especially home network, improving and making Wi-Fi connections more secure, care needed to avoid phishing by emails, closing security holes caused by outdated software and the importance of backing up your data.

6. Have you ever worked with API? Can you describe what is it for?

I recently used the Google Maps API key for a mobile application to access user's exact location. I introduced it on the manifest file that was xml to get access to the user's location.

API (Application Programming Interface) is a set of programming routines and standards for accessing a software application or web-based platform.

An API is created when a software company intends for other software developers to develop products associated with its service. There are several of them that make their codes and instructions available for use on other sites in the most convenient way for their users.

7. Ignoring cookies, what other technology or approach you can use to store data on client side?

We can use sessionStorage. However, once the browser is closed, information will be deleted.

We can use localStorage, the information is saved even if the browser is closed.

8. Pick a site you are familiar with and list 3-5 things you would do to improve its UI/UX.

http://www.conneelybuilders.com/

My observations for this site would be:

- Obtain SSL certificate, to allow encrypted communication between an Internet browser and a web server. Offering reliability and security to users.

- There are several problems in loading images from JQuery library.

- Poor responsiveness for mobile and tablets, with a score of 12/100 in the analysis of PageSpeed Insights, further penalizing positioning in search engines.

- Problems with social media links.

- Navbar and Footer with loading error on an item.

My recommendations:

- Focusing on responsiveness for mobile devices.

- Creation of gallery according to the projects carried out, with quality photos and responsive sizes. Using Optimize images, measurements, and quality.

- Improving page loading, using cache.

- Correcting issues in the navigation menu and social media.

- Making the site faster, with responsive images

- Improving and indexing for searching engines and give users a better experience.