By OnlineInterviewQuestions.com

Vaadin Interview Questions

What is Vaadin?

Vaadin is one of the open source platforms for web application development. The Vaadin platform typically includes a Java web framework, a set of web components, and a set of tools and application starters. The flagship product of Vaadin is Vaadin Flow, which was previously known as Vaadin Framework. It basically allows the implementation of HTML5 web user interfaces by making the use of the Java Programming Language.

Q1. How can you install the Vaadin components? Give an example.

The Vaadin components are typically installed with npm or Bower. For example, the following command installs the vaadin-button component: bower install vaadin/vaadin-button

Q2. What are the features of Vaadin flow?

The following are the features of Vaadin flow:
- User interface implementation with nothing more than Java: Vaadin Flow allows the usage of existing interface components and the implementation of new ones by using Java code running on the server side. It is possible to create and modify the DOM from the server side.
- Web Components integration: Integration with the Web Components is provided through the @Tag and @Import annotations.
- Router: The Router is an essential and core concept in Vaadin Flow and enables navigation via URLs. The Router allows the connection of user interface components to the URLs. It is based on the HTML5 History API, which allows end users to navigate through pages while also preserving the page state.
- Data binding: Data binding is done via the Binder class. This feature allows synchronizing the values in input fields with server-side data models.
- HTML templates: Vaadin Flow allows defining the HTML templates with automated client-server communication and data binding in case of using Polymer-based templates.
- Customization of the look and feel: The look and feel customization can be done with the help of CSS, HTML custom styles, or by readymade themes configuration.
- Spring Integration: Vaadin Flow includes Spring Framework 5 and Spring Boot 2 integration as well.

Q3. How would you provide an overview of the Vaadin architecture?

Vaadin consists of a server-side framework and a client-side engine. A developer creates the UI using the components, and Vaadin takes care of sending the UI state to the browser and rendering it there. The client-side engine captures user interaction and sends it to the server as needed. User interaction is can be reacted to by registering event listeners for the components. This makes it easy to separate the user interface from the business logic.

Q4. How is Vaadin different from other web frameworks with respect to response to Spring Roo or Play?

Vaadin supports Spring Roo. The Roo plugin has been created in collaboration with VMWare. Thus, in contrast to many other web frameworks, Vaadin does not require HTML, XML, templates or JavaScript. A Vaadin application is created using just pure Java or any other Java Virtual Machine (JVM) language.

Q5. What are the add-ons? Categorize them.

In addition to the components, themes, layouts, and data sources inbuilt into the core Vaadin library, many others are available as add-ons. Vaadin Directory offers a wide collection of add-ons for Vaadin, and the user may also find others from independent sources. Add-ons are also a way to share a user's own components between projects. There are currently over a hundred and eighty add-ons available. They are divided to the following categories:

- UI components – These add new functionality to your user interfaces
- Data components – They interface various data sources to Vaadin components
- Themes –These add a fresh look to your application
- Miscellaneous –This comprises of everything else.

Most of the add-ons are free under the Apache 2.0 license, but some of them are commercial or dual licensed.

Q6. Which mobile support exists for Vaadin?

A Vaadin UI does not rely on any plugins; therefore it can be rendered on any modern browser, including mobile browsers.   Additionally, the release of version 6.6 brought many special improvements targeted solely for touch devices owing to the high number of mobile users. These include sliders, one-finger touch scrolling, sub-window handling, drag and drop and more. However, in order to bring your Vaadin touch interface to the next level, every user must consider the Vaadin TouchKit. It is a Vaadin add-on, which makes it really easy to create Vaadin UI's with a native iOS look and feel. The new major version of with a ton of changes, an improvement is all hyped up for this application. Vaadin TouchKit is a commercial add-on released with dual licensing.

Q7. Explain what Vaadin does?

Vaadin is a web framework, which makes creation of beautiful web user interfaces super easy. A user may create his UI using the server-side API in pure Java, and Vaadin automatically takes care of all of the RPC and browser stuff. Vaadin comprises a comprehensive set of rich and beautiful components. The resulting UI is fully Ajax enabled as well as out of the box and can be easily customized using CSS. Vaadin requires no browser plugins and supports all modern browsers, application servers, and Java portals.

Q8. Which development tools exist to help developer productivity?

With regards to IDE support, there are plugins for Eclipse and Netbe.
The visual editor makes it easy to create views and composite components using a WYSIWYG interface. There is also a plugin for Spring Roo which allows the developer to easily create a rich UI for his domain model. The Vaadin Sampler makes it easy to see all different components in action. Source code snippets are included. The Chameleon Theme Builder makes it easy to create a look-and-feel for the developer's application. The commercial support service, the Vaadin Pro Account is also a good productivity booster as it includes several features, which ensure that you get the most out of Vaadin.

Q9. Which company backs the Vaadin framework?

The Vaadin Framework is created and supported by Vaadin Ltd, a Finnish company founded 11 years ago.

Q10. How to install add-ons?

One can install add-ons from Vaadin Directory by just adding a Maven or an Ivy dependency, or downloading the JAR package and dropping it in the web library folder of the project.

Q11. What are Vaadin components?

Vaadin Elements is a collection of Web Components for JavaScript and HTML developers. It is built on Google's Polymer Vaadin Elements ads enterprise grade components such as a high performing data grid and charts. Vaadin has a comprehensive set of beautifully crafted, high performance, and adaptable UI components for modern mobile-first web apps. They are the ideal building blocks for Progressive Web Applications.

Q12. What is Vaadin Flow?

Vaadin Flow is a new Java web framework for building modern web apps and websites, which was introduced with the versionVaadin 10. It is an important part of the Vaadin Platform and is basically a successor for the Vaadin Framework, which brings Web Component support to Java users. Flow allows developers to be super productive by creating UIs in Java or by using HTML Templates for composing the UI and binding it to any backend using Java. The router is a core concept in Vaadin flow, which also enables navigation for the website or web app.
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