



Struts Interview Questions and Answers

Introduction

When it comes to developing Java web applications, Struts is the reigning king in that area. Due to Struts' collaboration and utilization of Java technologies, it has become more sought-after and prominent in the IT sector, especially among developers. Which is why learning Struts and making a career out of it can be the best decision you can make in your profession. That is why these Struts Interview Questions and Answers are created. These interview questions will give you a holistic understanding of what kinds of questions to expect in the Struts interview, which will eventually enhance your learning and preparation. Make your skills visible with our [Java Struts certification course](#).

List of Struts Interview Questions for Freshers

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2. Explain the concept of tiles in Struts?

3. Explain Action Servlets in Struts.
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6. What is DynaActionForm in Struts?
7. How many servlet controllers does a typical Struts application employ?
8. Explain ForwardAction in Struts.

Find our [Struts course syllabus](#) to explore complete concepts.

Struts Interview Questions and Answers for Freshers

1. What is Struts?

Struts is an open-source Java web application framework with MVC architecture, offering components like Actions and Validators, and integration with Java EE technologies. It was developed by Craig McClanahan, donated to Apache in 2000, and while once popular, other frameworks like Spring MVC and JSF have since become more widely used for Java web development.

2. Explain the concept of tiles in Struts?

In Struts, “tiles” are a framework for managing web application layouts.

- They define reusable templates that include common elements like headers and footers. Each template allows placeholders for dynamic content, enabling the assembly of complete web pages while maintaining consistency.
- Configuration is typically handled via XML files, such as tiles-defs.xml, ensuring seamless integration with Struts for modular and reusable web application development.

3. Explain Action Servlets in Struts.

- Action Servlets in Struts act as the primary controller for handling user requests in Java web applications.
- They analyze incoming requests to determine which Action class should execute specific business logic, based on mappings defined in struts-config.xml.

- After execution, Action Servlets manage the results, often forwarding them to JSPs for presentation, thereby supporting the MVC pattern for structured and maintainable web development.

4. Explain the concept of Action Servlet Singleton in Struts.

In Struts, the “Action Servlet Singleton” pattern ensures that only one instance of the Action Servlet (ActionServlet) exists throughout the application’s lifecycle. This singleton instance, configured in web.xml, centrally controls all incoming requests, promoting efficient resource management, consistent request handling, and thread safety. By maintaining a single controller instance, this pattern supports the MVC architecture, enhancing scalability and maintainability of Java web applications.

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5. Explain Action Form in Struts.

- In Struts, an “Action Form” is a Java object that captures and validates user input from HTML forms submitted by clients, typically web browsers.
- It acts as a JavaBean with properties corresponding to form fields, facilitating data handling between the web presentation layer and business logic.
- Struts integrates Action Forms to enforce validation rules, manage form data lifecycle, and support different scopes (e.g., request, session), enhancing the separation of concerns in MVC architecture for Java web applications.

6. What is DynaActionForm in Struts?

DynaActionForm in Struts is a specialized Action Form that allows dynamic definition of properties at runtime via configuration, such as struts-config.xml. It simplifies development by managing multiple form properties in a single instance, supports flexible form data handling, and facilitates validation, making it ideal for agile Java web application development.

7. How many servlet controllers does a typical Struts application employ?

A typical Struts application employs one servlet controller, which is usually the `ActionServlet`.

8. Explain ForwardAction in Struts.

`ForwardAction` in Struts serves to navigate within web applications, directing control between actions or directly to JSP pages. It separates navigation logic from business logic, enhancing application structure and maintainability through configuration in `struts-config.xml`. When used, `ForwardAction` returns an `ActionForward` object to specify the destination, integrating smoothly with Struts' MVC architecture for efficient flow management.

Get expertise with this MVC architecture with our [Struts tutorial for beginners](#).

List of Struts Interview Questions for Experienced

1. How is MVC architecture implemented in the Struts framework?
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3. What are the components of the Struts framework?
4. How does validation work in Struts?
5. How are exceptions handled in Struts?
6. How does Struts support internationalization (i18n)?
7. Describe the flow of control in a typical Struts application.

Struts Technical Interview Questions and Answers for Experienced

1. How is MVC architecture implemented in the Struts framework?

In the Struts framework, the MVC (Model-View-Controller) architecture is structured as follows:

- **Model:** Manages application data and logic using JavaBeans or POJOs. It interacts with databases, web services, or other data sources to handle business operations.
- **View:** Represents the presentation layer using technologies like JavaServer Pages (JSP) or FreeMarker templates. Views render data from the Model into a user-friendly format and capture user inputs.
- **Controller:** Orchestrates application flow and user interactions through the `ActionServlet`, a specialized servlet. It handles incoming requests, determines which Action to execute based on configuration, and delegates control to appropriate Action classes.

2. What are the benefits of Struts MVC?

The following are the benefits of the Struts MVC:

- **Separation of Concerns:** Clearly separates data management (Model), user interface (View), and application flow control (Controller), enhancing maintainability and extensibility.
- **Reusability:** Enables the reuse of Actions and Views across different application sections, promoting code efficiency.
- **Scalability:** Organizes code into modular components, facilitating the development of scalable web applications.

3. What are the components of the Struts framework?

The following are the components of the Struts framework:

ActionServlet:

- **Role:** Acts as the central controller servlet, managing request flow within the application.
- **Function:** Processes incoming requests, identifies the appropriate Action class based on configuration, and delegates control to relevant components.

Action Class:

- **Role:** Implements business logic for handling user requests.
- **Function:** Executes specific actions based on user interactions, interacts with the Model to process data, and prepares responses for presentation.

ActionMapping:

- **Role:** Maps URLs or request parameters to specific Action classes.
- **Function:** Configured in struts-config.xml to define routing rules for requests, ensuring proper execution of associated Actions.

ActionForm:

- **Role:** Manages user input validation and data capture from HTML forms.
- **Function:** Acts as a JavaBean to validate and hold form data, ensuring compliance with defined rules before processing by Action classes.

ActionForward:

- **Role:** Specifies navigation rules and destination paths after executing an Action.
- **Function:** Configured to control application flow, facilitating smooth transitions between different sections of the application.

Interceptor:

- **Role:** Enhances Action functionality by intercepting requests and responses.
- **Function:** Executes code before or after Action execution, enabling tasks like logging, validation, or security checks across multiple Actions.

View (JSP, FreeMarker):

- **Role:** Renders the user interface and presents data to users.
- **Function:** Generates dynamic HTML or other markup using data from Actions or directly from the Model, ensuring interactive and responsive user experiences.

Validator Framework:

- **Role:** Validates user input and ensures data integrity before processing.
- **Function:** Defines validation rules for ActionForms and input data, verifying correctness based on specified criteria to maintain application reliability.

Configuration Files (struts-config.xml, struts.xml):

- **Role:** Centralizes application configuration settings and mappings.
- **Function:** Specifies relationships between URLs, Actions, ActionForms, and Views, ensuring consistent behavior and facilitating efficient application management.

Tiles:

- **Role:** Provides a template framework for managing reusable layouts.
- **Function:** Defines modular page fragments (tiles) like headers, footers, and navigation bars for consistent design across multiple pages, enhancing application aesthetics and usability.

Exception Handling:

- **Role:** Manages and resolves application exceptions.
- **Function:** Configured to handle errors gracefully, displaying appropriate messages or redirecting users to error pages to maintain application stability and user satisfaction.

Explore our [struts project ideas](#) to practice more.

4. How does validation work in Struts?

- Validation in Struts utilizes the Validator Framework, where validation rules are specified in XML configuration files (typically validation.xml).
- These rules define criteria for validating user input, such as required fields or data formats.
- Errors encountered during validation are managed through objects like ActionErrors and ActionMessages, which provide mechanisms for handling and displaying validation messages to users.

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5. How are exceptions handled in Struts?

- Exceptions in Struts are effectively managed through the framework's built-in exception handling mechanisms.
- Developers configure exception handling behaviors in the struts-config.xml file, specifying how different types of exceptions should be caught and processed. This approach ensures that unexpected errors are gracefully

handled, preventing application crashes and maintaining overall stability and usability.

6. How does Struts support internationalization (i18n)?

- Struts facilitates internationalization (i18n) by supporting resource bundles and message properties files. Developers can create these files to store messages and labels in multiple languages and locales.
- By referencing these resource bundles in their application code, developers enable Struts to dynamically display content in the appropriate language based on the user's locale settings. This capability allows applications to deliver a seamless multilingual experience to users worldwide.

7. Describe the flow of control in a typical Struts application.

- **Request Reception:** The ActionServlet first receives an incoming request from the client.
- **Action Mapping:** Next, the ActionServlet looks up the struts-config.xml configuration file to determine the appropriate ActionMapping for the received request.
- **Action Execution:** The Action class linked with the identified ActionMapping processes the request. It may interact with the Model layer to fetch or update data as needed.
- **Result Forwarding:** After processing, the Action returns an ActionForward object that specifies the next step, which could be rendering a JSP page or forwarding to another Action for further processing.
- **View Rendering:** Finally, the designated View (typically a JSP page) renders the response. It incorporates data from the Model that was prepared by the Action, and sends the resulting page back to the client.

Conclusion

These **Struts Interview Questions and Answers** touch on almost all major concepts in Struts. So, by learning these Struts interview questions and answers, students will surely have an overall knowledge of most of the questions that can be expected in

Struts. That is indeed the intention of this blog, which has the most frequently asked Struts interview questions that were curated with great care for learners. Hone your skills with our [software training institute in Chennai](#).