Question 1: What is EDT thread in Swing?

10 AWT and Swing Interview questions with AnswersAnswer : This is one of the basic questions in Swing and AWT interviews. EDT stands for Event dispatcher thread. EDT is one of the most important thing to learn about Swing, Since Swing is single-threaded all GUI drawing and event handling is done in EDT thread and that's why its recommended not to perform any time consuming task e.g. connecting to database or opening network connection in Event Dispatcher thread or EDT thread. If you do that, it may lead to frozen or hung GUI. This question leads to several other questions in Java, e.g. If you can not open database connection in EDT thread than how will you open db connection with button click etc. well this can be done by spawning a new thread from button click and opening db connection there.

Question 2: What is difference between invokeAndWait and invokeLater in Java?

Answer : This is one of my favourite Swing question in Java Interviews. Knowledge of invokeAndWait and invokeLater is must for a good Swing developer because Swing is not thread-safe and at same time you can not perform time consuming task in EDT thread, as discussed in first Swing interview question. InvokeAndWait and InvokeLater method allows to enqueue task for EDT thread to perform, InvokeAndWait is a blocking method in Java and does it synchronously and invokeLater does it asynchronously. Since GUI can only be updated in Event dispatcher thread, if you need to show progress of any task, you can use these two methods. See my post Difference between invokeAndWait and invokeLater in Java for more detailed answer of this Swing question.

Question 3: What is difference between Swing and AWT in Java?

Answer : One of the most frequently asked AWT and Swing Interview question. One answer of this question is that, Swing is a considered as light weight and AWT is considered as heavy weight. Another difference between AWT and Swing is that, Swing offers uniform look and feel across platform while look and feel of AWT GUI application are platform dependent because AWT mostly use native components e.g. a AWT windows will look different in DOS and Windows operating system.

Question 4: What is difference between paint and repaint in Java Swing?

Answer : This can be a tough Java question if you are not familiar with Swing API. Well, this is similar to start() and run() method of thread class. As calling start() method will eventually calls run() method of Runnable interface, Calling repaint() will call paint() method in Swing. Since painting can only be done in EDT thread, repaint() just put a paint request in EDT Queue, later

EDT thread may combine several repaint request to one and can perform repainting. repaint() is a not a blocking method in Java and returns quickly.

Question 5: What is difference between BorderLayout and GridLayout ?

Answer : This is one of interesting Swing interview question. BorderLayout and GridLayout are two widely used LayoutManager from Swing API, former arranges components in predefined position e.g. NORTH, SOUTH, EAST and WEST while later arranges components one after other until there is space and wraps them afterwards. This Swing question becomes more difficult when Interviewer asked to write code to implement a layout e.g. drawing a layout and ask you to implement as discussed in Top 10 Swing interview questions in Java.

Question 6: How to change a button from enable to disable after click ?

Answer : When button is clicked an action event is fired which can be captured by implementing ActionListener interface and actionPerformed(ActionEvent ae) method. You can then call button.setEnable(false) to disable this button.

Question 7: Why Swing is called light weight ?

Answer : Most of Swing component are inherited form JComponent and doesn't required a native peer and that's why they are referred as light weight component. light weight component implement look and feel in Java rather than using look and feel of native component and that's why Swing's look and feel remains same across platform.

Question 8: Is Swing Thread safe in Java ?

Answer : This is one of the tricky question in Java Swing and AWT. No, Swing is not thread-safe in Java. Swing components are not thread-safe they can not be modified from multiple threads. All swing components are designed to be updated by using Event dispatcher thread or EDT thread. See How to write thread-safe code in Java to know more about thread-safety. By the way you can use invokeAndWait and invokeLater to safely update swing components as discussed in previous Swing interview question.

Question 9: Which method of Swing are thread-safe?

Answer : This AWT and Swing question is asked as follow-up of previous Swing interview question. Only couple of methods like repaint() and revalidate() are thread-safe in Swing, i.e. they can be called from multiple threads without additional synchronization in Java.

Question 10: What is difference between Container and Component ?

Answer : Main difference between Container and Component is that former can hold other components e.g. JFrame which is used as container to hold other components e.g. JButton. This is rather a simple Swing question and mostly asked in telephonic or upto 2 years experienced programmers.

That's on this list of Swing Interview questions and answers in Java. Despite reducing popularity and losing competition with C#, Swing is a great GUI technology and one of the most preferred technology for implementing thick clients in Java. Especially in finance and insurance domain, where client application need to work with high volume of data, Java Swing is the solution. Good Swing developers are hard to find and that's why well paid in this industry.

Other Java Interview Questions from Java

Question 1. What's Java Swing?

Answer :

Swing is a GUI toolkit for Java. It is one part of the Java Foundation Classes (JFC). Swing includes graphical user interface (GUI) widgets such as text boxes, buttons, split-panes, and tables.

Swing widgets provide more sophisticated GUI components than the earlier Abstract Window Toolkit. Since they are written in pure Java, they run the same on all platforms, unlike the AWT which is tied to the underlying platform's windowing system. Swing supports pluggable look and feel – not by using the native platform's facilities, but by roughly emulating them. This means you can get any supported look and feel on any platform. The disadvantage of lightweight components is slower execution. The advantage is uniform behavior on all platforms.

Question 2. What Is Jfc?

Answer :

JFC stands for Java Foundation Classes. The Java Foundation Classes (JFC) are a set of Java class libraries provided as part of Java 2 Platform, Standard Edition (J2SE) to support building graphics user interface (GUI) and graphics functionality for client applications that will run on popular platforms such as Microsoft Windows, Linux, and Mac OSX.

Adv Java Interview Questions

Question 3. What Is Awt?

Answer :

AWT stands for Abstract Window Toolkit. AWT enables programmers to develop Java applications with GUI components, such as windows, and buttons. The Java Virtual Machine (JVM) is responsible for translating the AWT calls into the appropriate calls to the host operating system.

Question 4. What Are The Differences Between Swing And Awt?

Answer :

AWT is heavy-weight components, but Swing is light-weight components. AWT is OS dependent because it uses native components, But Swing components are OS independent. We can change

the look and feel in Swing which is not possible in AWT. Swing takes less memory compared to AWT. For drawing AWT uses screen rendering where Swing uses double buffering.

Adv Java Tutorial

Question 5. What Are Heavyweight Components?

Answer :

A heavyweight component is one that is associated with its own native screen resource (commonly known as a peer).

J2EE Interview Questions

Question 6. What Is Lightweight Component?

Answer :

A lightweight component is one that "borrows" the screen resource of an ancestor (which means it has no native resource of its own -- so it's "lighter").

Question 7. What Is Double Buffering?

Answer :

Double buffering is the process of use of two buffers rather than one to temporarily hold data being moved to and from an I/O device. Double buffering increases data transfer speed because one buffer can be filled while the other is being emptied.

J2EE Tutorial Core Java Interview Questions

Question 8. What Is An Event In Swing?

Answer :

Changing the state of an object is called an event.

Question 9. What Is An Event Handler In Swing?

Answer :

An event handler is a part of a computer program created to tell the program how to act in response to a specific event.

JSP Interview Questions

Question 10. What Is A Layout Manager?

Answer :

A layout manager is an object that is used to organize components in a container.

Core Java Tutorial

Question 11. What Is Clipping?

Answer :

Clipping is the process of confining paint operations to a limited area or shape.

Java-Springs Interview Questions

Question 12. Which Containers Use A Border Layout As Their Default Layout In Swing?

Answer :

The window, Frame and Dialog classes use a border layout as their default layout.

Adv Java Interview Questions

Question 13. What Is The Preferred Size Of A Component?

Answer :

The preferred size of a component is the minimum component size that will allow the component to display normally.

JSP Tutorial

Question 14. What Method Is Used To Specify A Container's Layout?

Answer :

The setLayout() method is used to specify a container's layout.

Question 15. Which Containers Use A Flowlayout As Their Default Layout?

Answer :

The Panel and Applet classes use the FlowLayout as their default layout.

JMS(Java Message Service) Interview Questions

Question 16. Which Method Of The Component Class Is Used To Set The Position And Size Of A Component?

Answer :

setBounds

Method of the Component class is used to set the position and size of a component.

Java-Springs Tutorial

Question 17. What Is The What Is The Difference Between Invokeandwait() And Invokelater()??

Answer :

invokeAndWait() method in swing is synchronous. It blocks until Runnable task is complete. InvokeLater() method in swing is asynchronous. It posts an action event to the event queue and returns immediately. It will not wait for the task to complete.

Java applet Interview Questions

Question 18. Why Should Any Swing Call Back Implementation Execute Quickly?

Answer :

Callbacks are invoked by the event dispatch thread. Event dispatch thread blocks processing of other events as long as call back method executes.

J2EE Interview Questions

Question 19. What Is An Applet?

Answer :

Applet is a java program that runs inside a web browser.

Java Tutorial

Question 20. What Is The Difference Between Applications And Applets?

Answer :

Application must be run explicitly within Java Virtual Machine whereas applet loads and runs itself automatically in a java-enabled browser. Application starts execution with its main method whereas applet starts execution with its init method. Application can run with or without graphical user interface whereas applet must run within a graphical user interface. In order to run an applet we need a java enabled web browser or an appletviewer.

Java Interview Questions

Question 21. Which Method Is Used By The Applet To Recognize The Height And Width?

Answer :

getParameters()

Method is used by the applet to recognize the height and width.

Question 22. When We Should Go For Codebase In Applet?

Answer :

If the applet class is not in the same directory, codebase is used.

Java 8 Tutorial

Question 23. What Is The Lifecycle Of An Applet?

Answer :

init( ) method - called when an applet is first loaded

start( ) method - called each time an applet is started

paint( ) method - called when the applet is minimized or maximized

stop( ) method - called when the browser moves off the applet's page

destroy( ) method - called when the browser is finished with the applet

Java 8 Interview Questions

Question 24. Which Method Is Used For Setting Security In Applets?

Answer :

setSecurityManager()

Method is used for setting security in applets .

Core Java Interview Questions

Question 25. What Is An Event And What Are The Models Available For Event Handling?

Answer :

Changing the state of an object is called an event. An event is an event object that describes a state of change. In other words, event occurs when an action is generated, like pressing a key on keyboard, clicking mouse, etc. There different types of models for handling events are event-inheritance model and event-delegation model

Adaptive software development Tutorial

Question 26. What Are The Advantages Of The Event-delegation Model Over The Event-inheritance Model?

Answer :

Event-delegation model has two advantages over event-inheritance model. a)Event delegation model enables event handling by objects other than the ones that generate the events. This allows a clean separation between a component's design and its use. b)It performs much better in applications where many events are generated. This performance improvement is due to event-delegation model does not have to be repeatedly process unhandled events as is the case of the event-inheritance.

Java Programmer Interview Questions

Question 27. What Are Types Of Applets?

Answer :

There are two different types of applets. that are defined as :

Trusted Applets.

Untrusted applets.

Trusted Applets : are applets with predefined security.

Untrusted Applets : are applets without any security.

JSP Interview Questions

Question 28. Give Us The Name Of The List Layoutmanagers In Java?

Answer :

List is here :

Flow Layout Manager

Grid Layout Manager

Box Layout Manager

Border Layout Manager

Card Layout Manager

GridBag Layout Manager.

Question 29. Difference Between Paint() And Paintcomponent()?

Answer :

The Key point is that the paint() method invokes three methods in the following order :

PaintComponent()

paintBorder()

paintChildren()

As a general rule, in Swing, we should be overriding the paintComponent method unless we know what we are doing paintComponent() paints only component (panel) but paint() paints component and all its children.

Question 30. How Are The Elements Of A Gridbaglayout Organized?

Answer :

The Elements of a GridBagLayout are organized according to a grid. However,the elements are of different sizes and may occupy more than row or column of the grid. In addition, the rows and columns may have diff sizes.

Question 31. How Are The Elements Of A Borderlayout Organized?

Answer :

The Elements of a BorderLayout are organized at the borders(North, South, East and West) and the center of a container.

Question 32. What Is The Relationship Between The Canvas Class And The Graphics Class?

Answer :

A Canvas object provides access to a graphics object via its paint() method.

Question 33. What Is The Diff Between Choice And The List?

Answer :

The difference are :

A Choice is displayed in a compact from that requires we to pull ot down tosee the list of available choice, Oly one item may be selected from a Choice.

A List may be dsplyaed in such a way that several List items are visible. A List supports the selection of the one or more List items .

Java-Springs Interview Questions

Question 34. When Should The Method Invokelater() Be Used?

Answer :

This method is used to ensure that Swing components are updated through the event-dispatching thread.

Question 35. What Advantage Do Java's Layout Managers Provide Over Traditional Windowing Systems?

Answer :

Java uses layout managers to lay out components in a consistent manner across all windowing platforms. Since Java's layout managers aren't tied to absolute sizing and positioning, they are able to accommodate platformspecific differences among windowing systems.

Question 36. What Is The Relationship Between Clipping And Repainting?

Answer :

When a window is repainted by the AWT painting thread, it sets the clipping regions to the area of the window that requires repainting.

JMS(Java Message Service) Interview Questions

Question 37. What Is The Difference Between A Window And A Frame?

Answer :

The Frame class extends Window to define a main application window that can have a menu bar. A window can be model.

Question 38. How The Canvas Class And The Graphics Class Are Related?

Answer :

A Canvas object provides access to a Graphics object via its paint() method.

Question 39. Which Is The Super Class Of All Event Classes?

Answer :

The java.awt.AWTEvent class is the highest-level class in the AWT event-class hierarchy.

Question 40. What Is The Difference Between A Menuitem And A Checkboxmenuitem?

Answer :

The CheckboxMenuItem class extends the MenuItem class to support a menu item that may be checked or unchecked.

Java applet Interview Questions

Question 41. What Is The Purpose Of The Enableevents() Method?

Answer :

The enableEvents() method is used to enable an event for a particular object.Normally, an event is enabled when a listener is added to an object for a particular event. The enableEvents() method is used by objects that handle events by overriding their event-dispatch methods.

Question 42. What Is The Difference Between A Canvas And A Scroll Pane?

Answer :

Canvas is a component. ScrollPane is a container.

Canvas is a rectangular area where the application can draw or trap input events. ScrollPane implements horizontal and vertical scrolling.

Java Interview Questions

Question 43. What Is A Convertor?

Answer :

Converter is basically an application that converts distance measurements between metric and U.S units.

Question 44. What Is The Difference Between Jfc & Wfc?

Answer :

JFC supports robust and portable user interfaces. The Swing classes are robust, compatible with AWT, and provide you with a great deal of control over a user interface. Since source code is available, it is relatively easy to extend the JFC to do exactly what you need it to do. But the number of third-party controls written for Swing is still relatively small.

WFC runs only on the Windows (32-bit) user interface, and uses Microsoft extensions to Java for event handling and ActiveX integration. Because ActiveX components are available to WFC programs, there are theoretically more controls available for WFC than for JFC. In practice, however, most ActiveX vendors do not actively support WFC, so the number of controls available for WFC is probably smaller than for JFC. The WFC programming model is closely aligned with the Windows platform.

Question 45. What Method Is Used To Specify A Container's Layout?

Answer :

The SetLayout() method is basically used to specify a container's layout.

Question 46. What Is The Difference Between Awt And Swt?

Answer :

SWT : SWT is stands for Standard Widget Toolkit, It is a completely independent Graphical User Interface (GUI) toolkit from IBM. They created it for the creation of Eclipse Integrated Development Environment (IDE).AWT is from Sun Microsystems.

Question 47. Why Does Jcomponent Class Have Add() And Remove() Methods But Component Class Does Not?

Answer :

JComponent is a subclass of Container and can contain other components and JComponents.

Question 48. What Is Difference Between Swing And Jsf?

Answer :

The key difference is that JSF runs on server, It needs a server like Tomcat or WebLogic or WebSphere. It displays HTML to the client. But Swing program is a stand alone application.

Question 49. What Does Realized Mean?

Answer :

Realized mean basically is component, Which has been painted on screen or that is ready to be painted. Realization can take place by invoking any of these methods. Which are following as :

SetVisible(true).

Show() .

Pack().

Question 50. What Is The Default Layout For A Contentpane In Jfc?

Answer :

The Defaulf Layout for the ConteutPane in JFC is that :

BorderLayout.