

# 18 Lecture - CS506

## Important Subjective

Certainly, here are 10 short subjective questions about Java Graphics along with their answers:

**\*\*Question 1: What is Java Graphics?\***

**\*\*Answer:\*\* Java Graphics is a library that allows you to create and manipulate graphical elements, such as shapes, images, and text, within graphical user interface (GUI) applications.**

**\*\*Question 2: What is the role of the `paintComponent()` method in Java Graphics?\***

**\*\*Answer:\*\* The `paintComponent()` method is used to render graphical elements on a component in Java Swing. It's called automatically when the component needs to be redrawn, such as when it's first displayed or when its appearance changes.**

**\*\*Question 3: How can you create a graphical window in Java?\***

**\*\*Answer:\*\* You can create a graphical window by creating an instance of the `JFrame` class, which represents a top-level window, and adding graphical components to it.**

**\*\*Question 4: What's the purpose of the `setColor()` method in Java Graphics?\***

**\*\*Answer:\*\* The `setColor()` method sets the current color used for drawing operations. Any subsequent drawing operations will use the specified color.**

**\*\*Question 5: How do you draw a line using Java Graphics?\***

**\*\*Answer:\*\* To draw a line, you can use the `drawLine()` method, which takes the coordinates of the starting and ending points of the line as its parameters.**

**\*\*Question 6: What's the difference between `paint()` and `paintComponent()` methods?\***

**\*\*Answer:\*\* The `paint()` method is responsible for painting the entire component, including its borders, whereas the `paintComponent()` method is specifically used to paint the content area of the component.**

**\*\*Question 7: How can you draw an image on a graphical component in Java Graphics?\***

**\*\*Answer:\*\* You can draw an image using the `drawImage()` method. This method takes an `Image` object and the coordinates where the image should be drawn.**

**\*\*Question 8: What is double buffering in Java Graphics?\***

**\*\*Answer:\*\* Double buffering is a technique used to reduce flickering in graphical applications. It involves drawing graphics off-screen and then quickly swapping the off-screen buffer with the on-screen display to create a smooth visual experience.**

**\*\*Question 9: Explain the role of the `Graphics2D` class in Java Graphics.\***

**\*\*Answer:\*\* The `Graphics2D` class is an extension of the `Graphics` class and provides more advanced graphics capabilities. It offers additional methods for drawing shapes, applying transformations, and working with fonts and colors.**

**\*\*Question 10: How does event handling relate to Java Graphics?\***

**\*\*Answer:\*\* Event handling allows you to respond to user interactions in graphical applications. For example, you can use event listeners to detect mouse clicks, keyboard input, and other user actions and then update the graphics accordingly.**