JAVA ASSIGNMENT

ENES MUMEITA

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DATA SCIENCE

Java Applets Training Manual

- Prepared Training Manual on Java Applets

- Definition, Lifecycle, Advantages, Disadvantages, Usage, Security & Code Structure

What is a Java Applet?

- A Java applet is a small Java program that runs inside a web browser.

- It is embedded in HTML pages and executed by the Java Virtual Machine (JVM).

- Historically used for interactive features before JavaScript matured.

History & Purpose

- Applet technology was introduced to bring platform independent interactive applications on the web.

- Originally used for animations, forms, calculators, charts, multimedia etc.

- Famous in early 2000s but deprecated in modern browsers.

Applet Requirements

- - Java Development Kit (JDK)
- - Web browser that supports JVM plugin
- - HTML host page containing <applet> or <object> tag
- - Java compiler javac to compile .java file into .class bytecode

Applet Lifecycle Overview

- Applet lifecycle contains 5 major stages:
- 1. init()
- 2. start()
- 3. paint()
- 4. stop()
- 5. destroy()

- These methods are called automatically by the browser or applet viewer.

Example Lifecycle Flow Diagram

- Browser Loads -> init() -> start() -> paint() -> user interaction -> stop() -> destroy()

Basic Applet Java Code Structure

- import java.applet.Applet;
- import java.awt.Graphics;
- public class HelloApplet extends Applet {
- public void paint(Graphics g){
-    g.drawString("Hello Applet", 20, 20);
- }
- }

Advantages of Java Applets

- - Platform independent

- - Can be interactive

- - Secure (sandbox restricted)

- - Easy to deploy in web pages

Disadvantages of Java Applets

- - Modern browsers removed support

- - Requires JVM installation

- - Not mobile friendly

- - Security restrictions limit features

Conclusion

- Applets were extremely important in early internet history.

- However, due to security issues and evolution of JavaScript, HTML5 & modern frameworks, they became obsolete.

- Still studied today for academic and historical software engineering learning purposes.