

# JSP

Prof.Chintan Dave

# What is JSP ?

JavaServer Pages (JSP) is a server-side programming technology that enables the creation of dynamic, platform-independent method for building Web-based applications. JSP have access to the entire family of Java APIs, including the JDBC API to access enterprise databases

# Why Use JSP?

JSP allows embedding Dynamic Elements in HTML

JSP are always compiled before it's processed by the server unlike CGI/Perl

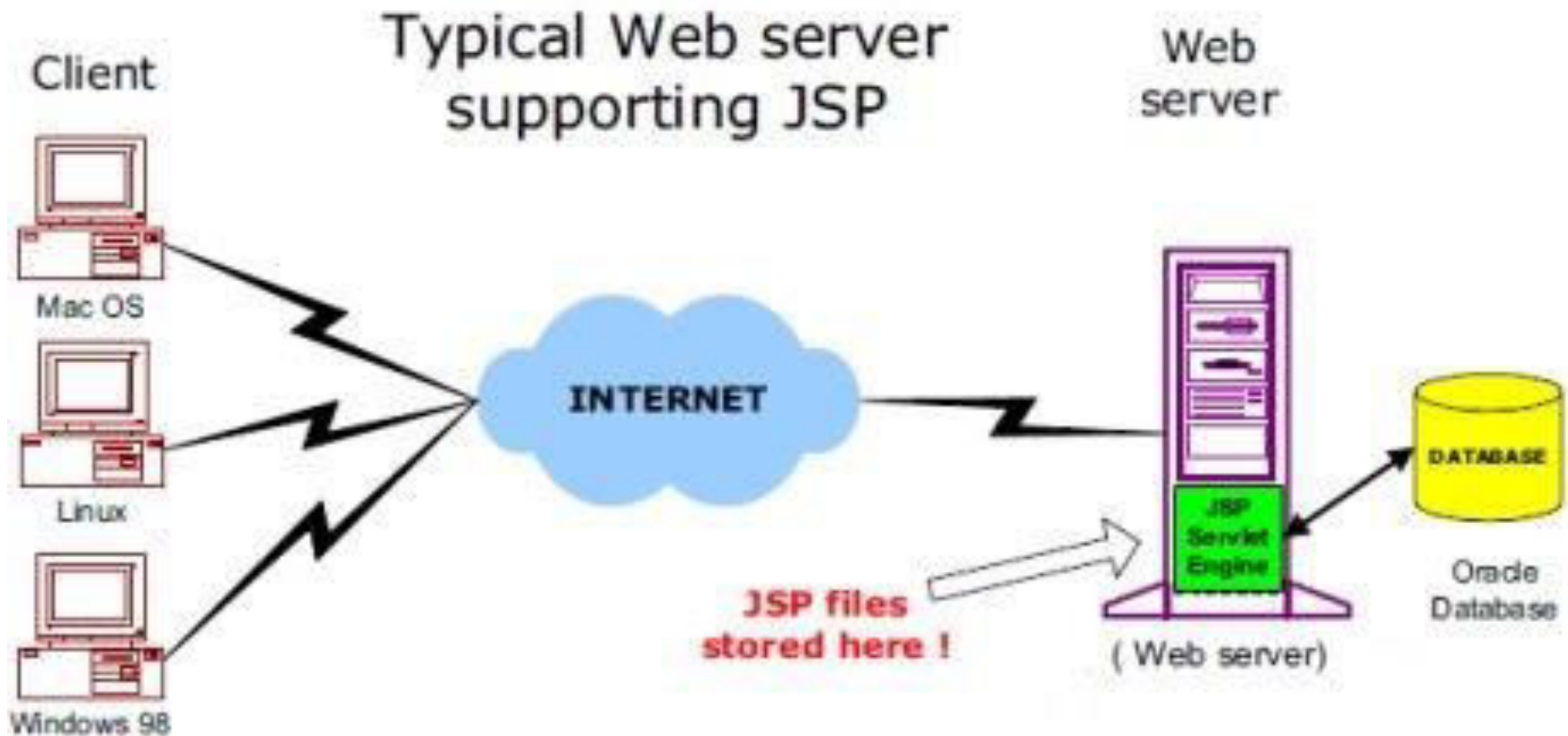
Uses Apis- Java APIs, including JDBC, JNDI, EJB

Uses an MVC Architecture

# Applications/Advantage Vs Other Technologies

- **vs. Active Server Pages (ASP)- It is Pure Java where as ASP Uses MS Lagunages...**
- **vs. Pure Servlets: Less Statements more Out Comes.**
- **vs. JavaScript: Client Side... Server Side Scenarios.**
- **vs. HTML:- Regular HTML, of course, cannot contain dynamic information**

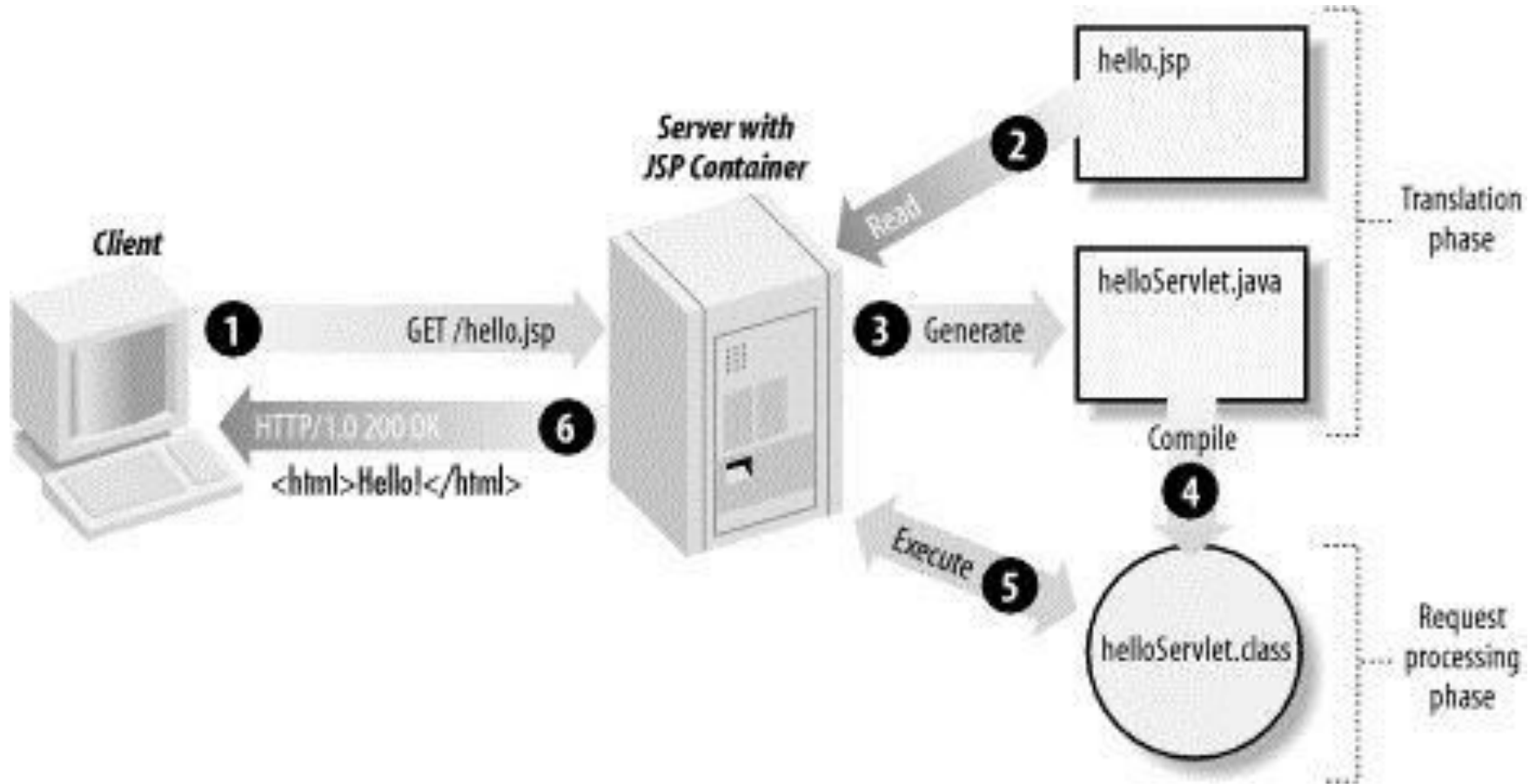
# JSP Architecture



# How it Processes

1. your browser sends an HTTP request to the web server
2. web server recognizes that the HTTP request is for a JSP page and forwards.
3. JSP engine loads the JSP page from disk and converts it into a servlet content.
4. JSP engine compiles the servlet into an executable class and forwards the original request.
5. web server forwards the HTTP response to your browser in terms of static HTML content

# Graphical Aspects..



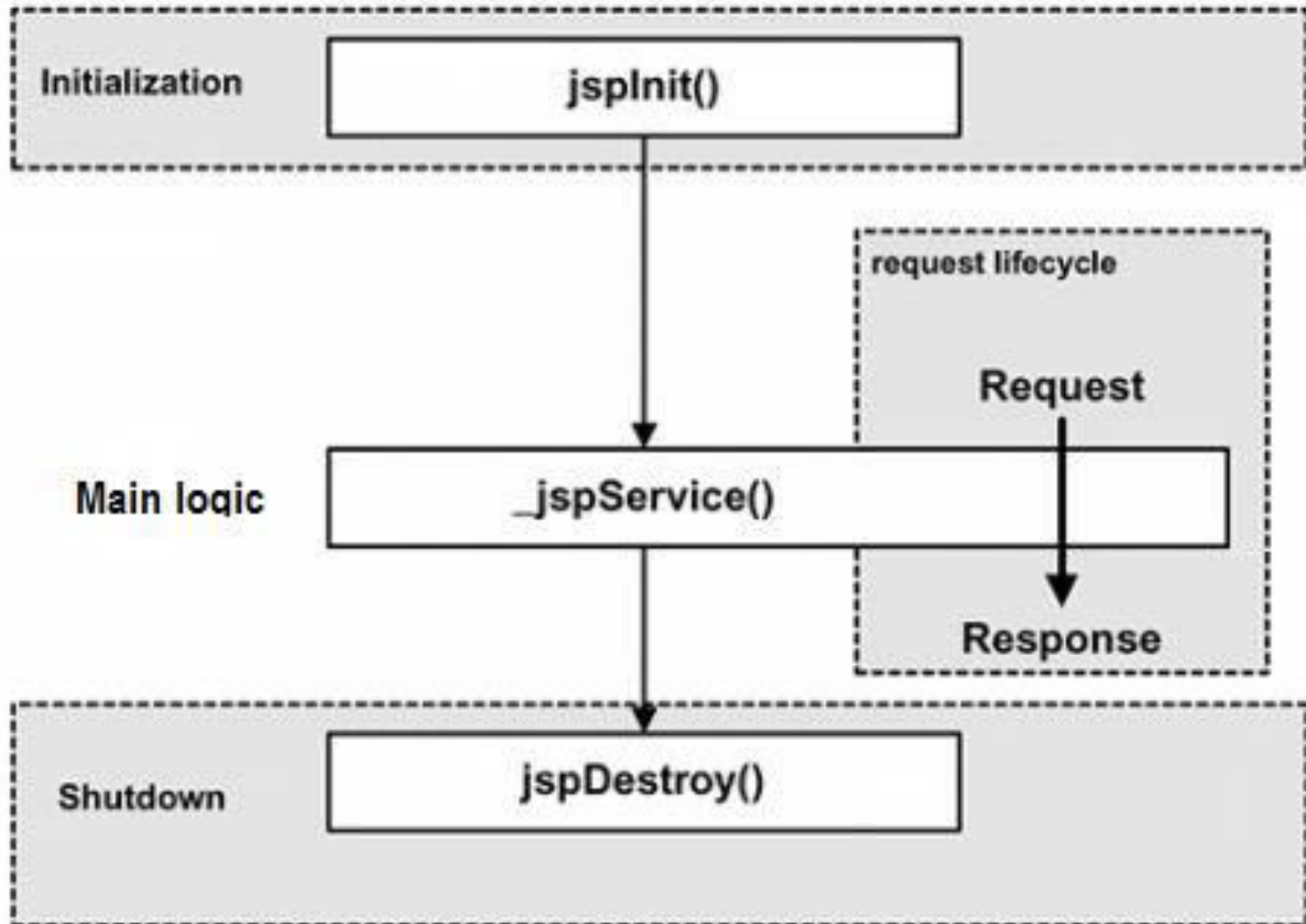
# JSP - Life Cycle

- Compilation
- Initialization
- Execution
- Cleanup

Are the main Paths for JSP.....



# JSP Life Cycle(Conti..)



# JSP Compilation

- When a browser asks for a JSP, the JSP engine first checks to see whether it needs to compile the page
- The compilation process involves three steps:
  1. Parsing the JSP.
  2. Turning the JSP into a servlet.
  3. Compiling the servlet.

# JSP Initialization

container loads a JSP it invokes the `jspInit()` method before servicing any requests. If you need to perform JSP-specific initialization, override the `jspInit()` method.

```
public void jspInit(){  
{  
// Initialization code... }
```

Typically initialization is performed only once and as with the servlet `init` method:

Like Database Connections , File Open Operations etc..

# JSP Execution

the JSP life cycle represents all interactions with requests until the JSP is destroyed.

the JSP engine invokes the **\_jspService()** method in the JSP. When browser sends Request.

```
void _jspService(HttpServletRequest request,  
    HttpServletResponse response) { // Service handling  
    code... }
```

Works with GET,POST,DELETE....

# JSP CleanUp

- The destruction phase of the JSP life cycle represents when a JSP is being removed from use by a container.
- The **jspDestroy()** method is the JSP equivalent of the destroy method for servlets.
- ```
public void jspDestroy()  
{  
// Your cleanup code goes here.  
}
```