

Java Servlets

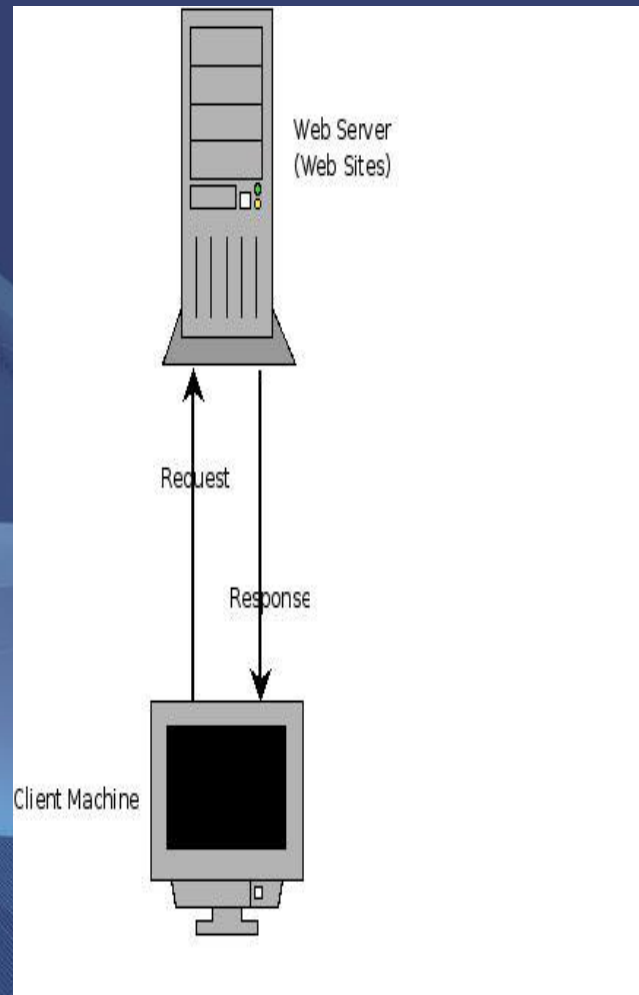
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HTTP



HTTP

- Hyper Text Transfer Protocol
- HTML pages stored in server machine
 - These web pages are sent to client machine, when the pages are request from client
- Client and Server are communicated by using REQUEST and RESPONSE
- Client can carry form data to the server

HTTP REQUEST

- It is command issued from client machine to the web server
 - It is a standard used by all browsers to contact server
- REQUEST are sent as URL, which may identify a web page or Web component
 - REQUEST can carry values in form components to the server
- Important HTTP request methods are
 - GET method
 - POST method

HTTP RESPONSE

HTTP REQUEST from client is served(web server) by sending HTTP RESPONSE

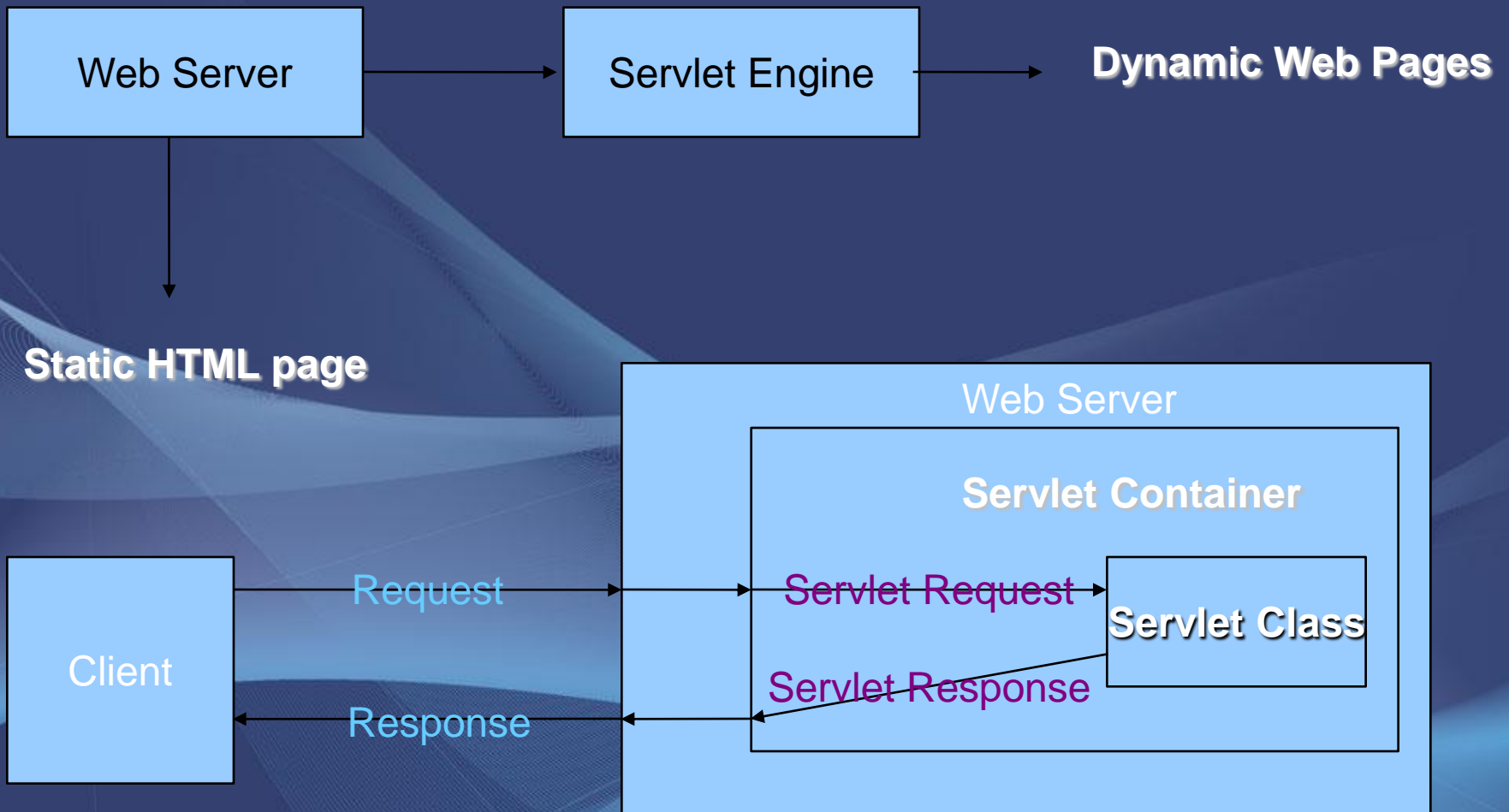
HTTP RESPONSE are sent as HTML pages

If the web server is equipped with any language compiler, then web server can execute that program and can send the output as HTML page

What is Servlet

- A servlet is a Java programming language class
- It is used to write server side program
- This program will execute upon HTTP request from client
- A servlet program can fetch the form component values

Servlet Enabled Web Server



Implementing Servlets

- Servlets are implemented using HttpServlet class, resides in javax.servlet package
- This class used to deal with http requests
- HttpServlet use the same standard followed in http request
 - Structure of request/response
 - Format of parameters

Servlet Containers

- Responsible for managing Servlet instances
 - Load
 - Initialize
 - Call
 - Release
- Creates object `ServletRequest` and stores all the data related with `HTTPREQUEST`
- Creates another object of `ServletResponse`, which encapsulates the response back to client

doPost and doGet methods

- doPost is a method used to handle http post method
- doGet is another method to handle http get method
- Both methods receives and initialize `HttpServletRequest` and `HttpServletResponse`

Sample Servlet Program

```
Import java.io.*;
```

```
Import javax.servlet.*;
```

```
Import javax.servlet.http.*;
```

```
Public class myservlet extends HttpServlet
```

```
{
```

```
    public void doGet(HttpServletRequest req,  
        HttpServletResponse res) throws IOException,  
        ServletException
```

```
    {
```

```
        res.setContentType("text/html");
```

```
        PrintWriter out=res.getWriter();
```

```
        out.println("<html><body>");
```

```
        out.println("Hai Hello");
```

```
        out.println("</body></html>");
```

Servlet Life Cycle

