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## Assignment :- 2

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### Servelant.

Servelant is a java program that run on servor and handles HTTP request and responses. It operates within webservice and is primarily used to extend capbility of server by generating dynamic web client.

### Handling HTTP Requests.

When HTTP request is made to webbrowser, it is directed to a servelant container.

The servelant container then determine which servelant to invoke based on URL of requests after servelant mapping defined in web application. Now below check step how servelant handles HTTP requests.

### Request Handling:-

- Their servelant `Service()` method is called by server when it recieves a requests for that servelant.

- `Service()` method determines type of HTTP request (Get, Post etc.)



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and delegates the request to appropriate method such as: `doGet()`, `doPost()`, `doPut()`, `doDelete()`

## Response Generation of HTTP request.

After processing the request servlet generate an HTTP response which is sent back to client

- Response Generation:-
- within method like `doGet()` or `doPost()`
- The servlet uses the `HttpServletResponse` Response object to formulate the response.
- This include setting response status codes, header and response body.

## ⇒ Methods.

- `doGet (HttpServlet Request request, HttpServletResponse response);`  
↳ Handles Get requests.
- `doPost (HttpServlet Request request, HttpServletResponse response);`  
↳ Handles Post requests.
- `doPut (HttpServlet Request request, HttpServletResponse response);`  
↳ Handles Put request.
- `doDelete (HttpServlet Request request, HttpServletResponse response);`  
↳ Handles Delete request.

## Role of HttpServlet Request.

Represent HTTP request sent by client.

Provide method to access request parameters, header session information and other data.

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Example methods:

- `getParameter (string name)`; retrieves a request parameter.
- `getHeader (string name)`; get a specific header value.

## Role Http Servlet Response.

- Represents HTTP response that the servlet send back to client.
- Provides Methods to set response status, header and content type, as well as to write response body.

• Example.

- 1) `setStatus (int status code)`: sets response status code.
- 2) `setContentType (string type)`: sets content type of response.
- 3) `getWriter ()`: Return PrintWriter object to write response body.

## Work Flow:-

- Client sends an HTTP Request
- web server receives request and routes it to appropriate servlet.
- `servlet Service ()` method is invoked.
- Request type is determined and corresponding method is called.
- within method `HttpServletRequest` is used to retrieve request data and `HttpServletResponse` is used to construct response.
- Response is sent back to client.