Servlet

Servlet Programming

- **In core java you have learned the applet programming which uses the java *java.applet.Applet* class to create an applet and init(),start(),stop() and destroy() of Applet class to execute the applet with applet container. As you know we can run the applet on the web browser but the applet is client side programming. If we want to do the server side programming with java we need to go for the servlet.**
- **Servlet is one of the J2EE API which is used to create dynamic web pages using java as programming language. If we want to run the servlet we require the web container to execute servlet file.**

Introduction

- **Initially in the early days CGI was used to write the server side scripting or to create the dynamic web pages with most of the languages like C, C++ and also with java.**
- **But when user request for something; server needs to create the different process for each & every HTTP request of the client.**
- **After giving the response to the client & executing the CGI script, server should release the system resources.**
- **It takes much execution time at the cost of performance.**

- **It was also expensive to open and close the database connection for each client.**
- **In addition, it is platform dependent.**
- **To overcome these limitations servlet was introduced by *Sun Microsystems.***

Advantages of Servlet over CGI

- ***Performance:*** **its performance is better than the CGI because it is not necessary to create the separet process to handle each HTTP request, it executes within the address space of the web server. So it saves the memory resources & makes performance better than CGI.**
- ***Platform independent:*** **A number of web servers from different vendors supports servlet API. It is written in java so program developed for this API can be run on any environment without recompilation.**
- ***Security:*** **Servlet run under the JVM and it is secured using java sandbox. It is also using Java Security Manager. It is server side component, so it inherits the security provided by the web server.**