Java as Product

* Java Standard Edition [ Java SE] - JDK // JAR
  + Console Application ---
  + Java Libraries
  + Desktop [ GUI ] Application [ Java Swing , Java FX ]
* Java Enterprise Edition [ Java EE] - Java EE SDK
  + Web Application / WAR
  + Enterprise Application //EAR
* Java Micro Edition [ Java ME ]
* Java Card - Store information in smart card chip.

**Java EE 7 Specification**

* **Donated to Eclipse for further enhancement.**

Jakarta EE

1. Web Profile
   1. Servlet
   2. JSP
   3. EJB Lite
   4. JAX-RS
2. Full Profile [ includes Web Profile]
   1. JAX-WS
   2. Messaging API
   3. Java Mail API

Java EE compatible Application Server will supply Java EE SDK

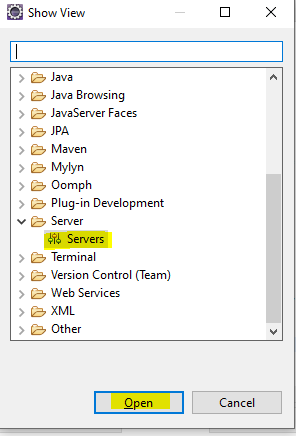
* Oracle WebLogic Server
* Redhat JBoss Server
* IBM Websphere
* Tom EE+ Application Server
* Tomcat Sever

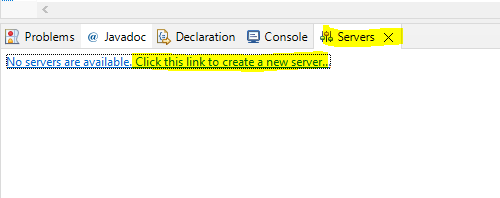
<https://www.apache.org/dyn/closer.cgi/tomee/tomee-8.0.15/apache-tomee-8.0.15-plus.zip>

* Download zip file
* Then extract it to a folder

In eclipse

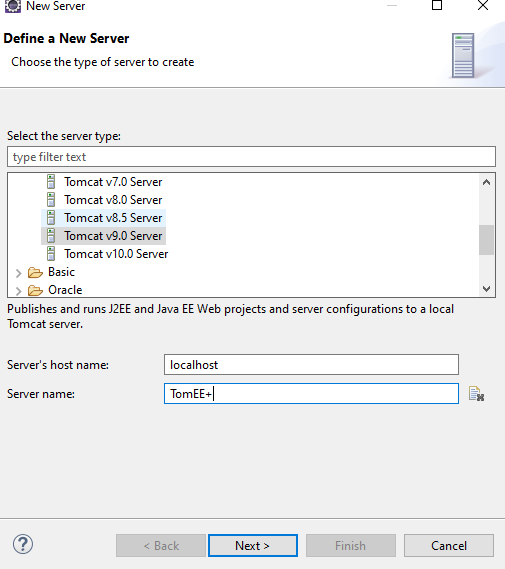
* Window – show view – Other – Server – Open



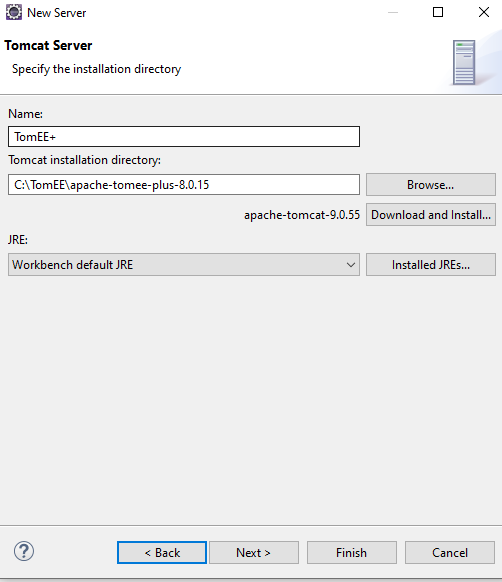
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Click the link to create a new Server.

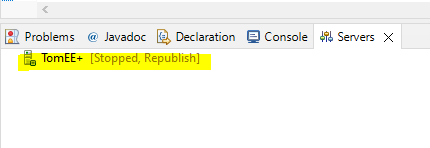
Select Apache Tomcat Sever V 9



Click next



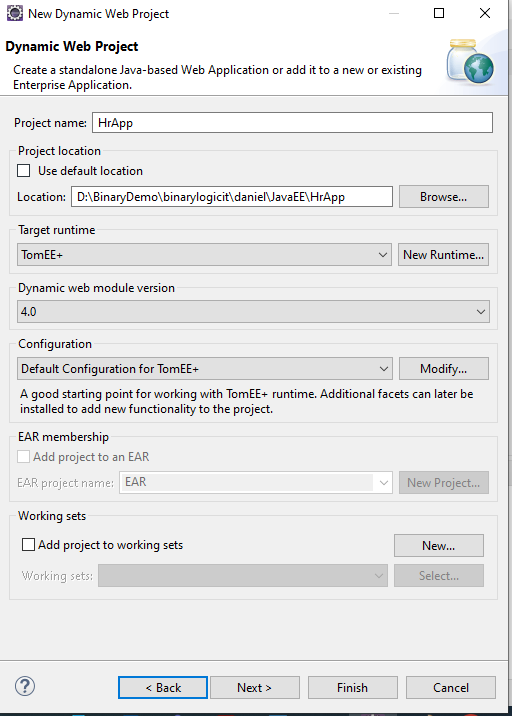
Next – Finish



Right click on TomEE+ and start

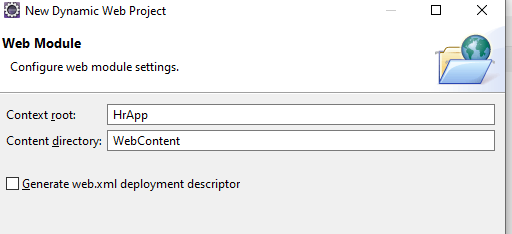
**Creating your First Web Application using Java EE**

* File – New – Other – Web – Dynamic Web Project

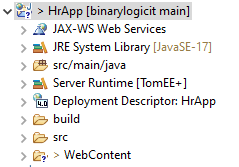


Next and Next Again

Content Director – Change to “WebContent”



Click Finish



M

OTHER JAVA CLASSES

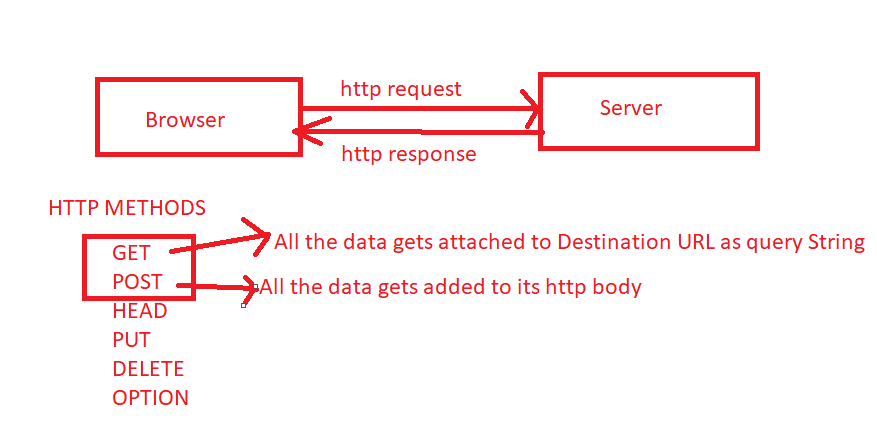
V : View

HTML, JSP

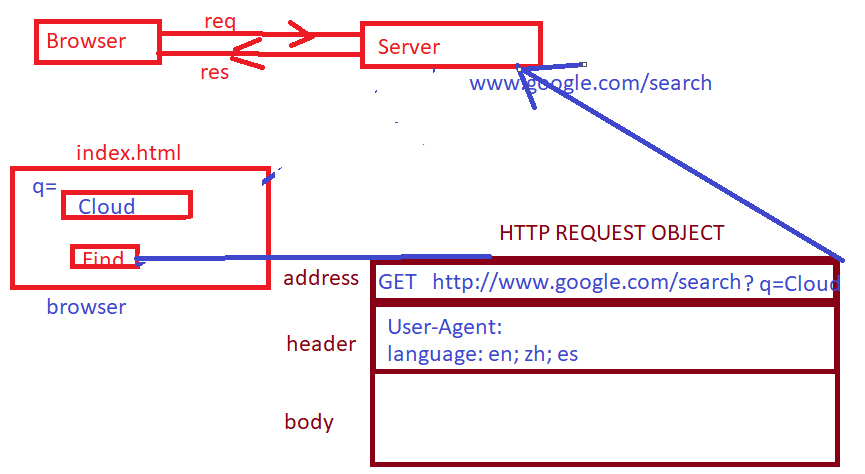
SERVLET

C : CONTROLLER

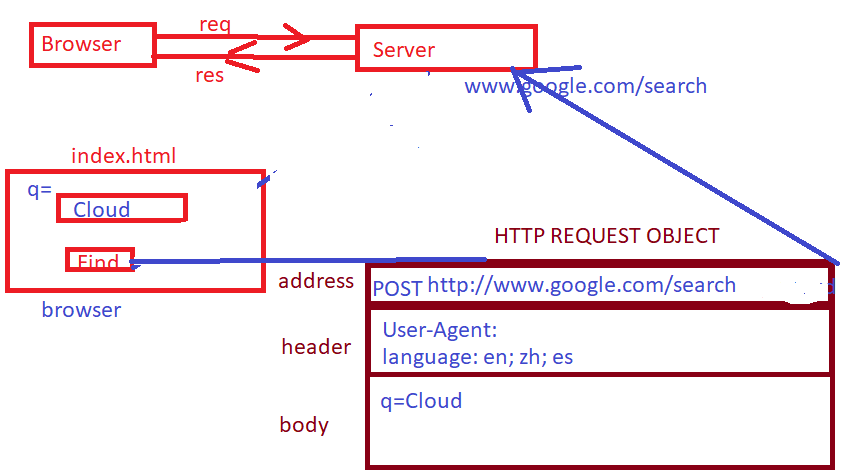
SERVLET

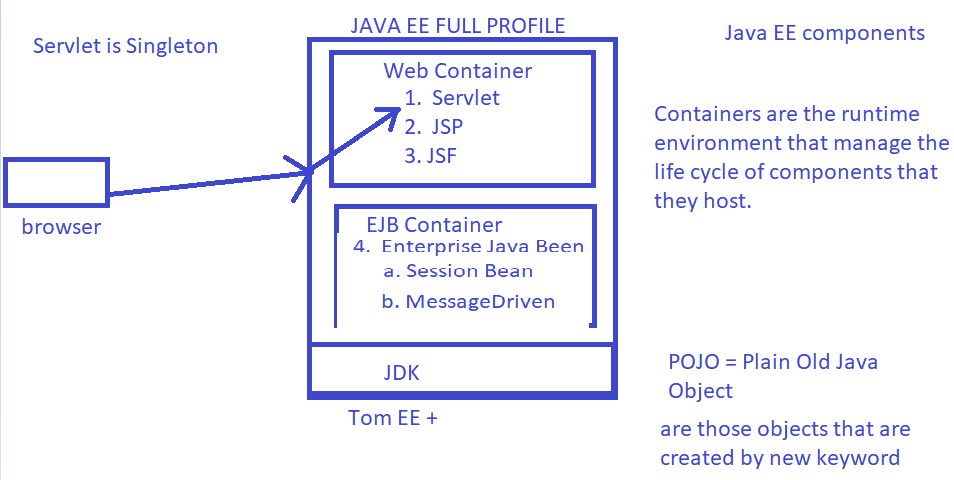


GET REQUEST



**POST**





Servlet Life Cycle

* Instantiation of Servlet is managed by Web Container.
* Only one instance / JVM is created – This means Servlet is Singleton.
* Instance if servlet is created at time when it was requested first.

//invoke only once after instantiation

public void init() { }

// invoke everytime it receives a request

service(ServletRequest req, ServletResponse res){

//doGet(HttpServletRequest req, HttpServletResponse res)

//doPost

}

// only once before servlet gets destroyed

destroy() {

// it is invoked at the time servlet destruction.

}