<https://tomee.apache.org/download.html>

download Apache TomEE 8.0 , Tom EE Plus Server.

Graphical user interface

Description automatically generated

Windows – download TomEE Plus Zip. Click on the name and it will take you to download page

Graphical user interface, text, application, email

Description automatically generated

1. Unzip it and go to eclipse – server option – add it
2. Server option – select tomcat v9.0

Graphical user interface, text, application

Description automatically generated

**Java EE : Java Enterprise Edition**

Diagram

Description automatically generated

Oracle Glassfish App Server

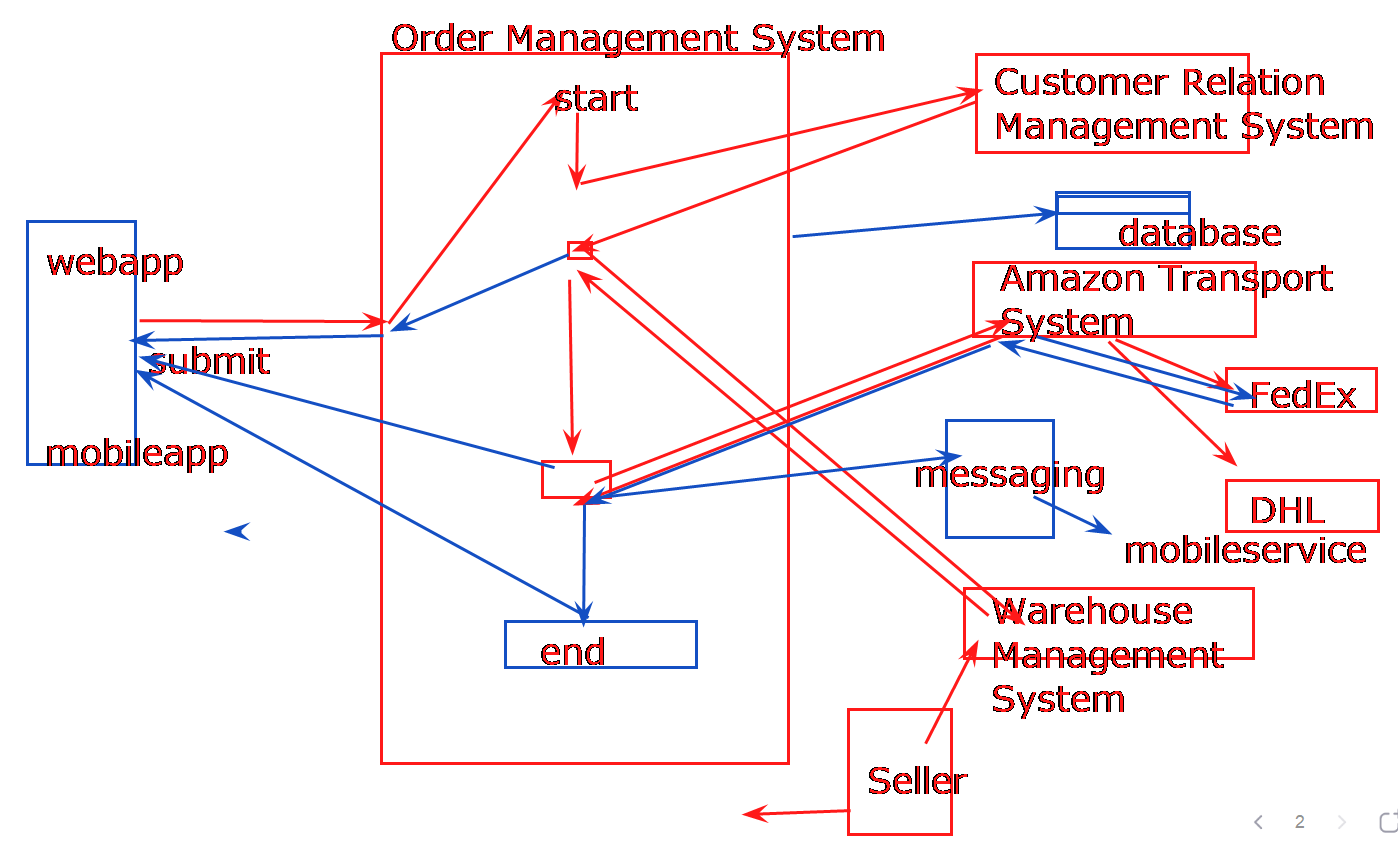
Java EE 7 Specification was the last released by Oracle Corporation.

Eclipse is Managing a new generation of Java EE technology under the brand name

Jakarta EE

Java EE Specification

* Web Application
* Enterprise Application
* Distributed Application
* Other APIs
  + Connector API
  + Messaging API



1. Web Application
   1. Servlet
   2. JSP
2. Enterprise Application
   1. EJB
   2. Web Services
      1. JAX-RS
      2. JAX-WS
3. JPA [ Skip ]
4. **Hibernate** is an implementation of JPA

**Servlet API**

Diagram

Description automatically generated

HTML is used for presentation logic only. [ Java Script & CSS or Bootstrap ]

Before Servlet, we were using CGI ( command gateway interface ) scripting language.

Servlet is an API that provides many interfaces and classes including documentation. Servlet is an interfaces. It is used to develop dynamic web pages as well.

Web Page :

**Static :** HTML

**Dynamic :** Content can be changed as per client request.

Tomcat/Jetty/Undertow Server is web server that can host only Servlet & JSP.

HTTP is the web-protocol.

GenericServlet implements Servlet

HttpServlet extends GenericServlet

Diagram

Description automatically generated

Diagram

Description automatically generated

Http Request Methods

* GET [ default ]
  + Any request submitted through the browser address bar
  + It submits the data by appending it to the target URL as query string.
  + Can be bookmarked

<https://www.google.com/search?q=Microsoft+Azure>

* POST
  + It submits the data internally without exposing it to the address bar.
  + You need to use HTML form or javascript to submit post request.

Servlet

service(request, response)

* + - doGet(request, response) if HTTP method is get type
    - doPost(request, response) if HTTP method is post type.

http://localhost:8080/JOR2-HelloWorldWeb/HelloWorld

Servlet can be used for presentation logic, but you need to embed HTML into Java coding.

**Servlet Life Cycle**

* Servlet is a singleton. Web Container is responsible for Servlet life-cycle management.

Diagram

Description automatically generated

Text, timeline

Description automatically generated with medium confidence

Graphical user interface, text, application

Description automatically generated

**Revisiting Exception : try with resource statement**

try(Resource Open Statement) // close the resources whenever you get out from try block

}catch(Exception ex){

} // no need to write finally

Resource Statement are statement that uses objects from the classes that implements AutoCloseable or Closeable interface.

package java.lang;

Interface AutoCloseable{

void close();

}

Interface Closeable extends AutoCloseable{

}

--- Java 7 , all the API that deals with I/O or database/network connection were refactored to use AutoCloseable or Closeable.

**Model – View – Controller [ MVC ] Design Pattern**

**Diagram

Description automatically generated**